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IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

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UNITED STATES AUTOMOBILE) (
ASSOCIATION

4

) (CIVIL ACTION NO.

5

VS.) (2:18-CV-245-JRG

6

) (MARSHALL, TEXAS
OCTOBER 31, 2019

7

WELLS FARGO BANK, N.A.) (8:40 A.M.

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TRANSCRIPT OF JURY TRIAL

10

MORNING SESSION

11

BEFORE THE HONORABLE CHIEF JUDGE RODNEY GILSTRAP,

12

UNITED STATES DISTRICT JUDGE

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FOR THE PLAINTIFF:

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19 Official Court Reporter
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23 (Proceedings recorded by mechanical stenography, transcript
24 produced on a CAT system.)
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08:40:53 1

P R O C E E D I N G S

08:40:53 2

(Jury out.)

08:40:54 3

COURT SECURITY OFFICER: All rise.

08:40:54 4

THE COURT: Be seated, please.

08:41:01 5

Are the parties prepared to read into the record

08:41:07 6

those items from the list of pre-admitted exhibits used

08:41:09 7

during yesterday's portion of the trial?

08:41:11 8

MR. BUNT: Yes, Your Honor, Plaintiff is.

08:41:13 9

THE COURT: Please proceed.

08:41:14 10

MR. BUNT: Your Honor, yesterday, Plaintiff used

08:41:18 11

Plaintiff's Exhibit 2, Plaintiff's Exhibit 4, Plaintiff's

08:41:22 12

Exhibit 31, Plaintiff's Exhibit 36, Plaintiff's Exhibit

08:41:27 13

151, Plaintiff's Exhibit 199, Plaintiff's Exhibit 1035,

08:41:34 14

1035, Plaintiff's Exhibit 1061, and Plaintiff's Exhibit

08:41:39 15

1062. And I don't know if the Defendants want to -- we

08:41:43 16

also used Defendant's Exhibit No. 11 yesterday, Your Honor.

08:41:47 17

THE COURT: All right. Is there any objection

08:41:49 18

from Defendant as to that rendition offered by Plaintiff?

08:41:55 19

MR. UNDERWOOD: No objection, Your Honor.

08:41:56 20

THE COURT: Do Defendants have a similar rendition

08:41:59 21

to read into the record?

08:42:00 22

MR. UNDERWOOD: We do not.

08:42:01 23

THE COURT: All right, thank you. Is there

08:42:04 24

anything further, counsel, that we should take up outside

08:42:04 25

the presence of the jury before I bring them in and

08:42:08 1 continue with Dr. Conte's testimony?

08:42:08 2 MR. SHEASBY: Your Honor, there is only one issue.
08:42:10 3 Mr. Calman has a medical condition that requires him to
08:42:12 4 potentially put an eye drop into his eye at unforeseen
08:42:17 5 moments. And so I don't know how you want to handle that.
08:42:20 6 I think Ms. Glasser is going to examine him and she has --
08:42:26 7 for that.

08:42:26 8 THE COURT: Is that something that should be
08:42:27 9 needed during his testimony?

08:42:29 10 MS. GLASSER: It could well come up during his
08:42:31 11 testimony. It comes on sort of without warning, and so we
08:42:35 12 were hoping that Your Honor could alert the jury in advance
08:42:38 13 that he does have a medical condition, and he may be
08:42:41 14 putting in eye drops during the testimony so that if, for
08:42:44 15 example, he starts doing it on cross they don't kind of
08:42:49 16 wonder, why is this going on?

08:42:50 17 THE COURT: Defendant aware of this situation?

08:42:51 18 MR. MELSHEIMER: I am. I understand it is
08:42:53 19 increased during stress from what I understand, Your
08:42:56 20 Honor -- I'm joking. We have no problem with the Court
08:42:59 21 instructing the jury about the eye drops or when it comes
08:43:02 22 up, or we certainly are not going to make an issue of it.

08:43:04 23 THE COURT: All right. Well, given that it's at
08:43:08 24 least possible, I'll tell the jury that it's possible that
08:43:10 25 he may do this, and if he does, it's because it's medically

08:43:13 1 required.

08:43:14 2 MS. GLASSER: Thank you very much, Your Honor.

08:43:15 3 THE COURT: That will be fine.

08:43:16 4 All right. I take it there's nothing further
08:43:18 5 then.

08:43:18 6 MR. SHEASBY: Nothing further.

08:43:22 7 MR. MELSHEIMER: Nothing further, Your Honor.

08:43:23 8 THE COURT: Let's bring in the jury.

08:43:35 9 Counsel, you may go to the podium and get ready.

08:43:39 10 MR. ROWLES: Yes, Your Honor.

08:43:41 11 COURT SECURITY OFFICER: All rise.

08:43:43 12 (Jury in.)

08:43:43 13 THE COURT: Welcome back, ladies and gentlemen.
08:43:57 14 Please have a seat.

08:43:58 15 But for the fact that the Astros lost the World
08:44:11 16 Series last night, it's good to see you, ladies and
08:44:13 17 gentlemen. We'll continue where we left off yesterday, and
08:44:15 18 that's with the direct testimony of Dr. Tom Conte.

08:44:21 19 Mr. Rowles, you may continue.

08:44:23 20 MR. ROWLES: Thank you, Your Honor.

08:44:23 21 THOMAS CONTE, PH.D., PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

08:44:23 22 DIRECT EXAMINATION CONTINUED

08:44:24 23 BY MR. ROWLES:

08:44:24 24 Q. Good morning, Professor Conte.

08:44:25 25 A. Good morning.

08:44:26 1 Q. Could you just remind the jury what claim limitation we
08:44:29 2 were discussing yesterday before we broke?

08:44:31 3 A. We were discussing, if you go back, monitoring an image
08:44:40 4 of the check in the field of view of the camera.

08:44:42 5 Q. And remind the jury what -- what is a preview frame,
08:44:47 6 what are we talking about here?

08:44:48 7 A. A preview frame is a frame that's coming off in live
08:44:53 8 view. We get 30 times per second, and Mr. Wood, who is
08:44:59 9 Mitek corporate representative -- remember, Mitek is the
08:45:02 10 software vendor for Wells Fargo -- also agrees that these
08:45:05 11 are preview frames.

08:45:06 12 Q. Now, were you in the Court during opening statements,
08:45:10 13 Professor Conte?

08:45:10 14 A. Yes, I was.

08:45:11 15 Q. And so you heard some discussion of Mr. Wood then,
08:45:13 16 right?

08:45:13 17 A. Yes, yes, I did.

08:45:14 18 Q. Now, when you were doing your analysis, did you have
08:45:17 19 the deposition testimony of Mr. Wood available to you?

08:45:20 20 A. Yes, I did.

08:45:22 21 Q. Is it fair to say that there is some disagreement
08:45:25 22 between yourself and Mr. Wood about how the Wells Fargo
08:45:27 23 system captures check images?

08:45:30 24 A. Yes.

08:45:31 25 Q. With respect to the monitoring of preview images and

08:45:35 1 assessing criteria, is there any disagreement between you
08:45:38 2 and Mr. Wood?

08:45:38 3 A. No, there isn't. He agrees that there's software
08:45:43 4 monitors, preview frames, and assesses it by the criteria
08:45:47 5 to see if it's a good image.

08:45:49 6 Q. Now, yesterday we looked at this list of monitoring
08:45:56 7 criteria. Did Mr. Wood say anything about whether the
08:46:00 8 Wells Fargo system uses these monitoring criteria?

08:46:02 9 A. Yes, he agreed they did.

08:46:04 10 Q. Now, what's the next claim limitation that you looked
08:46:06 11 at?

08:46:06 12 A. All right. So this is capture the image of the check
08:46:10 13 with the camera when the image of the check passes those
08:46:17 14 monitoring criteria. So the Court has construed this
08:46:20 15 phrase. So let me read this first.

08:46:22 16 Capture the image of the check with the camera at
08:46:26 17 or after the moment the image of the check passes the
08:46:29 18 monitoring criterion.

08:46:29 19 So what the Court has done is replaced "when" with
08:46:35 20 "at or after the moment."

08:46:38 21 Q. When you were reviewing source code and analyzing the
08:46:41 22 claims of the '571 patent, did you have the Court's
08:46:44 23 definition available to you?

08:46:45 24 A. I did.

08:46:46 25 Q. And did you apply any other definition or -- or change

08:46:50 1 any words around?

08:46:51 2 A. I did not.

08:46:52 3 Q. Could you explain to the jury how the capture process
08:46:58 4 works in the Wells Fargo system?

08:46:59 5 A. Yes. So what I've done -- we're going to talk about
08:47:02 6 software, but first I'm going to give you an over --

08:47:04 7 overview of how it works. So I've prepared this diagram of
08:47:08 8 what I found.

08:47:09 9 And what happens is a preview frame comes in, then
08:47:15 10 it's analyzed according to that criteria. Then there's a
08:47:19 11 decision point. Does it pass or doesn't it? Well, let's
08:47:25 12 say it doesn't pass.

08:47:26 13 What happens is the frame disappears, and it waits
08:47:29 14 for the next one to come in, again, 30th of a second. So
08:47:33 15 every 30 times -- 30 times a second these are coming in.

08:47:36 16 Q. And what happens in the Wells Fargo system if the image
08:47:40 17 passes the monitoring criterion?

08:47:44 18 A. Okay. Now, again, let's get to Step 2. That's where
08:47:47 19 we analyze the monitoring criteria. And then if it passes,
08:47:51 20 what it does is capture the check image, and I'll show you
08:47:56 21 where that happens. And, again, that happens after you
08:47:58 22 pass the monitoring criteria. So this is consistent with
08:48:01 23 the Court's claim construction, timing matters, the timing
08:48:05 24 matches the claim.

08:48:06 25 Q. And what happens after Step 3 where you capture the

08:48:09 1 check image?

08:48:10 2 A. After that, the -- the JPEG is sent to the bank, and
08:48:14 3 I'll show you where that happens, too.

08:48:17 4 Q. Professor Conte, is it your opinion that the check
08:48:20 5 image is only captured in Step 4 when the image is
08:48:23 6 transmitted to a bank a thousand miles away?

08:48:27 7 A. No.

08:48:28 8 Q. Did you hear counsel for Wells Fargo make a statement
08:48:31 9 about that in opening statements?

08:48:32 10 A. Yes, I heard counsel say that's my opinion.

08:48:34 11 Q. And is that an accurate or inaccurate description of
08:48:37 12 your opinion on infringement?

08:48:38 13 A. That's wholly inaccurate.

08:48:40 14 Q. Could you describe for the jury how capturing an image
08:48:46 15 works in a typical phone camera application?

08:48:50 16 A. Yes. So if you start up your phone and just use it as
08:48:54 17 a camera, you'll see this preview image as you move it
08:48:57 18 around, and then what you do is you press the shutter
08:49:00 19 button when you like the image, and that's going to create
08:49:03 20 a JPEG.

08:49:04 21 Now, JPEG stands for Joint Photographers Experts
08:49:15 22 Group. So this is a way to store images that was developed
08:49:18 23 by photographers in 1992, and it's there for digital
08:49:21 24 cameras. And then that JPEG is saved locally. Or if
08:49:25 25 you're like I do when I don't have much storage on my

08:49:29 1 phone, you save it to the cloud.

08:49:31 2 Q. Now, in this typical phone camera scenario, at what
08:49:35 3 point is the image captured?

08:49:36 4 A. It's captured when the user presses the shutter button
08:49:41 5 and it creates that JPEG.

08:49:43 6 Q. And how does that compare to the capture process in the
08:49:46 7 Wells Fargo system?

08:49:47 8 A. It's very similar, actually, except in the Wells Fargo
08:49:51 9 system, it waits until that monitoring criterion is passed,
08:49:55 10 and then it captures the image. So, in essence, it's
08:49:59 11 pressing the shutter button for you.

08:50:02 12 Q. And how does this capture process look on the Wells
08:50:05 13 Fargo application, to the user?

08:50:05 14 A. Thank you.

08:50:06 15 Let's go back to that -- that video and you can
08:50:09 16 see how it works again.

08:50:10 17 Here it is, you see the actor is zooming in. It
08:50:14 18 says, get closer, and then when it passes the monitoring
08:50:17 19 criterion, boom, it snaps the image.

08:50:20 20 Q. Did you look at any source code for this capture
08:50:24 21 process?

08:50:25 22 A. Yes, I did.

08:50:26 23 Q. What source code did you look at?

08:50:28 24 A. Okay. So I looked at source code that was labeled
08:50:34 25 (void)captureOutput. Now, what (void)captureOutput is,

08:50:42 1 it's the title of -- you can think of it as the title of a
08:50:44 2 book chapter or it's like a tab in your binder that you
08:50:47 3 have there where the tab might say the '571 patent. That's
08:50:50 4 what this is saying. Then you turn to the tab and you see
08:50:53 5 what the patent is.

08:50:54 6 Q. Now, the jury has seen at least part of this line,
08:50:58 7 2278, before, in this trial, right?

08:50:59 8 A. Yes, I believe Mr. Melsheimer used it in his opening
08:51:09 9 statement.

08:51:09 10 Q. Now, what exactly does Line 2278 of the source code do
08:51:13 11 in the application?

08:51:14 12 A. Nothing. It's just the title of the chapter. Nothing
08:51:20 13 is happening here.

08:51:21 14 Q. And what happens in the capture output chapter?

08:51:25 15 A. You see this runs from Lines 2279 to 2506, at 228 lines
08:51:31 16 of code. And I'm going to walk you through what those
08:51:34 17 lines of code do.

08:51:34 18 Q. So what's the first line of code we should start with?

08:51:40 19 A. Okay. Here it is. And the piece I want to point out
08:51:44 20 here is the piece that I -- I've labeled sampleBuffer.
08:51:50 21 That's that preview image, that 30 frames per second,
08:51:53 22 that's one of those frames that's coming in, and that's
08:51:56 23 what the app is showing on your screen. So that's why I've
08:51:59 24 circled it here. I want you to remember that, preview
08:52:02 25 buffer is the preview frame.

08:52:05 1 Q. And what is the source code --

08:52:06 2 A. I'm sorry, sampleBuffer is the preview frame.

08:52:09 3 Q. I apologize, Dr. Conte.

08:52:10 4 A. Yes.

08:52:11 5 Q. What does the application do with the preview frame?

08:52:13 6 A. Well, let's go a little further down in the code.

08:52:18 7 Remember how I said that code is a list of instructions, so
08:52:20 8 we're going to go follow these in order.

08:52:23 9 Now, I'm jumping over a few that just tests for
08:52:26 10 some corner cases like, hey, the camera was still focusing
08:52:30 11 or things like that. But after you pass this test, it
08:52:33 12 comes to this one. And what I want to point out to you
08:52:35 13 here is it takes sampleBuffer and it performs analyzeFrame
08:52:43 14 on it. So this is where it analyzes the frame according to
08:52:46 15 all those monitoring criterion to see if this is a good
08:52:50 16 check image.

08:52:50 17 Q. And what happens after the preview frame is analyzed?

08:52:54 18 A. Well, you see how it -- it -- over on the left here,
08:53:00 19 analyzeFrameResult, that's the answer to whether or not
08:53:03 20 this is a good frame. Okay. So let's see what happens to
08:53:06 21 that answer.

08:53:07 22 If you go a little further down in the code,
08:53:10 23 you'll find this test, and the test says if
08:53:15 24 analyzeFrameResult equals yes, that is saying what's going
08:53:19 25 to come later; what I'm going to describe later is what

08:53:22 1 happens after you pass the monitoring criterion. So this
08:53:26 2 is the "at or after" right here.

08:53:30 3 Q. So what does it mean for analyzeFrameResult to be yes?

08:53:36 4 A. It means that it has passed the monitoring criterion.

08:53:39 5 Q. And what would analyzeFrameResult be if the monitoring
08:53:44 6 criterion were not passed?

08:53:45 7 A. No.

08:53:46 8 Q. And so what happens after the monitoring criterion are
08:53:50 9 satisfied?

08:53:50 10 A. Okay. So this is a line a little further down. And
08:53:56 11 this is setting something we call a flag where you sort of
08:54:00 12 raise a flag.

08:54:00 13 Now, you've got to understand, software has a lot
08:54:03 14 of different workers going to power it, all right? And
08:54:06 15 because it has a lot of workers going in parallel, it wants
08:54:09 16 to tell the other workers what's going on. Think of it
08:54:12 17 like a Post-it that you put it on your door, and this
08:54:15 18 Post-it says, I'm capturing the frame now.

08:54:18 19 The reason it does that is, if another worker
08:54:21 20 comes in with another frame, it says: Ignore it. I found
08:54:25 21 my good frame. I'm capturing it now.

08:54:32 22 Q. And is this is capturing an image flag set before the
08:54:39 23 monitoring criteria are passed?

08:54:39 24 A. No. This is only set after you pass the monitoring
08:54:42 25 criteria.

08:54:42 1 Q. And so what happens next?

08:54:44 2 A. All right. Now, this is interesting. So let me
08:54:46 3 explain some of the jargon here. You see that UXP, that's
08:54:50 4 user experience. And that UXPeventManager, that's a log
08:55:02 5 that it keeps of all the different things that happen when
08:55:02 6 a user is taking an image of a check.

08:55:05 7 In this case, what it does is it records the
08:55:06 8 elapsed time it took to capture the image, and it says
08:55:13 9 UXP_Capture_Time.

08:55:15 10 Now, I imagine Wells Fargo wants to know this
08:55:16 11 because it's taking too long to capture the image. Maybe
08:55:17 12 they want to go back and tweak their -- their application.
08:55:19 13 If it takes you 25 seconds, it's probably the app needs to
08:55:27 14 get a little better.

08:55:28 15 So they capture that -- that information gets
08:55:31 16 packaged up with the image in that JPEG, and that's sent to
08:55:35 17 the bank. And I'll show you again where that happens.

08:55:37 18 Q. So is it your opinion, Professor Conte, that the time
08:55:40 19 of capture is recorded in Line 2374?

08:55:43 20 A. Well, actually, it's the elapsed time. It's how long
08:55:46 21 it took to do the capturing from when you started until
08:55:48 22 when the capture happens.

08:55:53 23 Q. And so what happens after the -- the capture time is
08:55:55 24 recorded?

08:55:56 25 A. Okay. Let me point out this next line. What it does

08:55:59 1 is it calls another worker, and this worker is called
08:56:03 2 StartedAutoCapture. And what this worker does, this is the
08:56:09 3 guy that pops up that rectangle on your screen that says,
08:56:13 4 hey, success.

08:56:13 5 So when you see that rectangle, you've put the
08:56:17 6 capturing image flag on the door, you've recorded how long
08:56:20 7 it's -- it's taken to get to that point, and then you pop
08:56:24 8 up that rectangle.

08:56:25 9 Q. And so what happens after the success message is
08:56:32 10 displayed?

08:56:32 11 A. After the success message is displayed, that's when it
08:56:36 12 gets packaged up into a JPEG, and you see this
08:56:43 13 docCaptureResult. That's the result. It sets the result
08:56:45 14 to that JPEG. So this is where it says: Okay, the result
08:56:48 15 is the JPEG, the image is captured, it's in this JPEG.

08:56:51 16 Q. And so is this the point in the code where the check
08:56:55 17 image is captured?

08:56:58 18 A. Yes.

08:56:59 19 Q. And is this before or after the monitoring criteria are
08:57:00 20 passed?

08:57:01 21 A. It's after. Like I showed you -- remember that "if"
08:57:04 22 statement, all of this happened after I put the Post-it on
08:57:08 23 the door, I recorded the time, I've popped up the
08:57:09 24 rectangle, and then I put it in a JPEG, and I say, okay,
08:57:12 25 this is the result.

08:57:13 1 Q. Now, what happens to that check image JPEG after this
08:57:19 2 line of code?

08:57:19 3 A. That check image JPEG then is going to be ultimately
08:57:25 4 when the user hits deposit, it's sent to a bank.

08:57:30 5 Q. And is that the image that's going to be used to
08:57:32 6 deposit the check in the user's account?

08:57:34 7 A. Yes. That's the very image, yes.

08:57:36 8 Q. What happens to the preview frame or sample buffer that
08:57:40 9 we were looking at previously?

08:57:41 10 A. It's -- it disappears.

08:57:48 11 Q. Professor Conte, could you -- could you summarize the
08:57:50 12 sequence of code that you just walked through?

08:57:52 13 A. Yes. So we went through a lot of code. What I've done
08:57:55 14 is I've created a check list of all the steps.

08:57:58 15 So first, I showed you Line 2279. That's where
08:58:05 16 that sample buffer came in, and you obtained the preview
08:58:09 17 frame. And that's what that looked like.

08:58:11 18 Then I showed you where it analyzes that sample
08:58:13 19 buffer, and that's what that looked like. And it generates
08:58:17 20 this analyzeFrameResult.

08:58:17 21 Then I showed you where it checks if it passes the
08:58:17 22 criterion, and that looks like this. Now, I said -- and I
08:58:29 23 showed you things that happen after that point.

08:58:32 24 So first thing it does is it sets that capturing
08:58:36 25 flag. It puts the Post-it on the door to tell the next

08:58:39 1 worker, hey, you know, buzz off, I'm working right now on
08:58:43 2 capturing this frame. It records how long it took to get
08:58:48 3 to this point as capture time. It shows that success
08:58:54 4 message that pops up on the screen using this worker called
08:58:59 5 StartedAutoCapture.

08:59:04 6 And then finally it captures that image by
08:59:06 7 creating a JPEG and then storing it as a result that
08:59:10 8 ultimately is going to get sent to the bank.

08:59:13 9 Q. Now, did you look at any other materials other than
08:59:17 10 source code concerning the capture element?

08:59:19 11 A. Yeah. It's important also to look at the manuals that
08:59:21 12 the developers used -- that is, the people who use these
08:59:25 13 libraries to -- to create the application. And here's one
08:59:29 14 of them. This is called Mitek MiSnap SDK. SDK stands for
08:59:36 15 software developers kit. And this is the programmer's
08:59:41 16 guide.

08:59:42 17 So this is writing straight to the programmer
08:59:44 18 that's going to use this. And it says: Features. Among
08:59:47 19 it's many features, Mitek MiSnap provides -- and then I've
08:59:52 20 gone to the second bullet -- real-time feedback to the user
08:59:56 21 until a suitable image is detected, at which point it is
08:59:59 22 automatically captured.

09:00:01 23 So that's saying it waits until a suitable image
09:00:04 24 is found, you pass the monitoring criterion, and then
09:00:09 25 automatically captures. So that's consistent with what I

09:00:12 1 showed you in the code.

09:00:13 2 Q. Professor Conte, have you used programmer's guides like
09:00:18 3 this in your every day work?

09:00:19 4 A. I've used them. I've written them. I've taught
09:00:22 5 students and given students As and Fs on writing these
09:00:25 6 guides. These are very, very important. These are the --
09:00:28 7 how you tell someone else how to use your code.

09:00:32 8 Q. And this particular guide, Plaintiff's Exhibit 376,
09:00:35 9 who -- who was the target audience for this programmer's
09:00:37 10 guide?

09:00:37 11 A. Target audience is Wells Fargo. This is a programmer's
09:00:41 12 guide for someone building an application around Mitek.

09:00:46 13 Q. Now, would the Wells Fargo programmer using the
09:00:49 14 programmer's guide have access to the source code that you
09:00:52 15 walked the jury through before?

09:00:53 16 A. Not necessarily. You see, Mitek will only send you
09:00:59 17 what we call a binary. It's not the source code, but it's
09:01:02 18 just the raw machine instructions, just all the 1s and 0s.

09:01:07 19 Q. So what would a Wells Fargo programmer rely on to
09:01:11 20 understand how the Wells Fargo system was actually working?

09:01:14 21 A. Well, we rely on this programmer's guide. That's why
09:01:19 22 it's called that.

09:01:20 23 Q. Did you look at any other documents like this from
09:01:23 24 Mitek?

09:01:24 25 A. Yes. Here's a developer's guide. That's essentially

09:01:27 1 the same thing, and it goes through an example with the
09:01:30 2 different steps of -- of the Mitek software.

09:01:33 3 And here's a step I've pulled out. It says: Once
09:01:36 4 all conditions are met, MiSnap will automatically snap a
09:01:40 5 photo. All conditions. Pass the monitoring criterion,
09:01:46 6 okay? This happens after. But when is at or after? This
09:01:51 7 happens after you pass the monitoring criterion, and it
09:01:53 8 snaps the image, and there's that rectangle we saw.

09:01:56 9 Q. And is the developer's guide in Plaintiff's Exhibit
09:02:00 10 92 -- is this a later version of the MiSnap code than as
09:02:03 11 compared to Plaintiff's Exhibit 376?

09:02:05 12 A. Yes, this is a little bit later version -- describing a
09:02:08 13 little bit later version of the code.

09:02:10 14 Q. Did you consider any testimony from Mr. Wood or Mitek
09:02:16 15 about the accuracy of these programmer's guides and
09:02:19 16 developer's guides?

09:02:20 17 A. Yes. In fact, Mr. Wood was asked: Are these guides
09:02:24 18 accurate?

09:02:24 19 And he said: Well, we do our best.

09:02:26 20 Q. Do you know if Mr. Wood said anything else on that
09:02:28 21 topic?

09:02:29 22 A. I read his entire deposition, and later on he said:
09:02:33 23 Wait, they're inaccurate.

09:02:34 24 Q. Having looked at the Mitek source code yourself, what's
09:02:37 25 your conclusion about the accuracy of these statements in

09:02:41 1 the developer's documents?

09:02:45 2 A. For what I was concerned with, what relates to the
09:02:48 3 claims, the elements I was looking for, everything in the
09:02:50 4 developer's guides was accurate. Maybe he's talking about
09:02:54 5 a missing comma or semicolon somewhere, but these are
09:02:59 6 accurate.

09:02:59 7 Q. Did you look at any other materials from Mitek?

09:03:02 8 A. Yes, I did. Here's a marketing brochure they give out,
09:03:05 9 and look how they present it. Capture an image of a check
09:03:10 10 in three easy steps. Document is detected, and the image
09:03:14 11 sampled up to 30 frames per second. So it's getting
09:03:17 12 that -- those preview frames in.

09:03:19 13 Then it says: Document locked in. That's when
09:03:21 14 you pass the monitoring criterion. And then the image is
09:03:24 15 automatically captured.

09:03:27 16 Q. When you were conducting your infringement analysis,
09:03:31 17 did you consider any potential counterarguments from Wells
09:03:36 18 Fargo?

09:03:36 19 A. Yes, I did. One thing that Wells Fargo argued is that
09:03:42 20 capture is not done with a camera because the claim
09:03:45 21 language says: Capture with a camera.

09:03:49 22 Q. And what's your response to that argument?

09:03:51 23 A. Well, I think they're reading camera as just being the
09:03:54 24 sensor. I mean, a digital camera has a sensor. It has
09:03:57 25 optics. It has a processor that reads information off the

09:03:59 1 sensor. You have to have that or the image just sticks on
09:04:03 2 the sensor. You've got to have something that reads it off
09:04:05 3 the sensor and captures it in JPEG.

09:04:08 4 Q. And is this the same way that an ordinary smartphone
09:04:12 5 captures images with the camera?

09:04:14 6 A. Yeah, this is exactly what your smartphone does. You
09:04:17 7 open the camera app. I mean, clearly you're running
09:04:20 8 something on the processor -- on the computer part of your
09:04:22 9 phone.

09:04:24 10 Q. And so what do you ultimately make of -- of this
09:04:27 11 argument about capturing with a camera?

09:04:30 12 A. Well, I think that Wells Fargo is wrong here.

09:04:35 13 Q. And did you consider any other potential
09:04:38 14 counterarguments?

09:04:39 15 A. Yeah. The next thing Wells Fargo argues is, hey, wait,
09:04:44 16 capturing doesn't happen after the monitoring criteria are
09:04:48 17 passed.

09:04:49 18 Q. And is this more or less what you heard from
09:04:51 19 Mr. Melsheimer during opening statements?

09:04:53 20 A. That was the opening, yeah.

09:04:54 21 Q. And so what is your response to -- to that argument?

09:04:58 22 A. As I showed you, it contradicts Wells Fargo's source
09:05:03 23 code. It contradicts the developer's manuals I showed you.

09:05:07 24 The preview frames are temporary, and they
09:05:11 25 disappear. It's after you pass the monitoring criterion

09:05:15 1 that that JPEG is created, and that's the JPEG sent to the
09:05:21 2 bank.

09:05:21 3 Q. Now, you say created. At what point is the check image
09:05:26 4 that goes to the bank created?

09:05:28 5 A. It's created after you pass the monitoring criterion.

09:05:31 6 Q. And how do you know that?

09:05:32 7 A. It's in the code. This is a couple lines from the code
09:05:36 8 I just showed you. And if you pass the monitoring
09:05:40 9 criterion, if the analyzed result is yes, then you create
09:05:44 10 that JPEG, and you set that as the capture result.

09:05:50 11 Q. And so did you ultimately conclude that in the Wells
09:05:55 12 Fargo system, the check image is captured after the moment
09:06:00 13 the monitoring criteria are satisfied?

09:06:02 14 A. Yes, it's captured after the moment the monitoring
09:06:06 15 criteria are satisfied. I had multiple reasons to see
09:06:10 16 that. It's a lot of weight on this side of the scale.

09:06:12 17 Q. Did you also consider the Doctrine of Equivalents for
09:06:15 18 this claim limitation?

09:06:16 19 A. Yes. Just to be sure, I also applied the Doctrine of
09:06:19 20 Equivalents.

09:06:20 21 Now, remember, that is, something is
09:06:23 22 insubstantially different -- that nails versus screws, if
09:06:29 23 it passes this test. It performs substantially the same
09:06:33 24 function in substantially the same way to achieve
09:06:37 25 substantially the same results. Your legs don't fall off

09:06:44 1 your table.

09:06:45 2 Q. How did you apply the Doctrine of Equivalents to the
09:06:46 3 capture element of the '571 patent?

09:06:48 4 A. Well, let's go back to the element. It says:

09:06:50 5 Capturing the image of the check with the camera when --

09:06:53 6 and the Judge construed that as at or after -- the image of
09:06:58 7 the check passes the monitoring criterion. Okay?

09:07:02 8 Well, it's the same function either way. You end

09:07:05 9 up with an image of the check, right. What I showed you is

09:07:10 10 substantially the same way the check image to be produced

09:07:15 11 is -- let me say this exactly how I said it. Check image

09:07:21 12 to be sent produced only after the monitoring criteria

09:07:26 13 passed. And what's sent is what's created in that JPEG.

09:07:34 14 And you get substantially the same result. Only images

09:07:38 15 that pass the monitoring criterion in Wells Fargo's

09:07:42 16 application are the ones that get sent to the bank.

09:07:45 17 Q. Now, returning to your diagram, is it your opinion

09:07:53 18 that the check image capture happens in Step 3 of the

09:08:00 19 process you've illustrated?

09:08:00 20 A. Yes, it is. This is where you create that JPEG, like I

09:08:04 21 showed you, and it happens after Step 2 that if

09:08:08 22 analyzeResult equals yes, it happens after you pass the

09:08:10 23 monitoring criterion.

09:08:10 24 Q. And if for some reason the creation of that JPEG

09:08:12 25 weren't considered captured, would it be equivalent?

09:08:16 1 A. It would be equivalent. So the Doctrine of Equivalents
09:08:19 2 would apply, and that element would be present in that
09:08:23 3 case.

09:08:24 4 Q. Could you summarize for the jury the different evidence
09:08:28 5 that you considered for the capture element of the '571
09:08:32 6 patent, Claim 1?

09:08:33 7 A. All right. We went through the source code and capture
09:08:38 8 happens after the monitoring criterion are satisfied. You
09:08:40 9 saw that.

09:08:40 10 Went through the developer's and programmer's
09:08:46 11 guides, and they consistently say that capture happens
09:08:50 12 after you pass the monitoring criterion.

09:08:53 13 And then I showed you some witness testimony -- or
09:08:55 14 I talked about it -- that admitted that the processor is
09:09:00 15 part of the camera. You can't have a digital camera
09:09:04 16 without a processor. You can't use your camera on your
09:09:06 17 iPhone or your Android without launching the camera app
09:09:09 18 that runs on the processor.

09:09:10 19 And, also, I talked about the Doctrine of
09:09:16 20 Equivalents, that in this case, the screws equal the nails.

09:09:21 21 Q. And so what did you ultimately conclude with respect to
09:09:25 22 the capture element of the '571 patent, Claim 1?

09:09:28 23 A. For multiple reasons that I presented, this is present.
09:09:32 24 So we're going to put a checkmark there.

09:09:35 25 Q. Now, what's the next claim element that you looked at?

09:09:38 1 A. All right. This is providing the image of the check
09:09:41 2 from the camera to a depository via communication -- go
09:09:47 3 back, please -- via communication pathway between the
09:09:51 4 mobile device and the depository.

09:09:53 5 Okay. So let's unpack that. This is you're going
09:09:57 6 to take that image of the check that passes the monitoring
09:10:00 7 criterion, you're going to send it to a depository. That's
09:10:02 8 the bank. And you're going to send it after -- can you go
09:10:07 9 back one more --

09:10:09 10 Q. My apology, Professor Conte.

09:10:10 11 A. You're going to send it via communication pathway.
09:10:14 12 That's your cell phone network. Or if you're on WiFi,
09:10:17 13 WiFi.

09:10:18 14 Q. Now, does the Wells Fargo system provide the image of
09:10:21 15 the check to the depository in the way you described?

09:10:22 16 A. Yes, it does. So here's something from the app, some
09:10:26 17 more code, and you'll see up here is a comment from the
09:10:29 18 programmer. Upload the front and the back check image.

09:10:32 19 Now, what it does is it packages everything up
09:10:35 20 into something it calls body data. And what I've outlined
09:10:39 21 here is something in the code that is doing something
09:10:44 22 called network request.

09:10:44 23 What this -- this opens up connection and it's
09:10:49 24 kind of interesting how it does it. You see URL, that's a
09:10:53 25 web address. So it contacts the Wells Fargo server, in

09:10:56 1 essence, through the web with a special web address.

09:11:01 2 And when it does that, it uploads this body data
09:11:05 3 that includes both the front and the back image and the
09:11:07 4 account you want to deposit it into and the amount you want
09:11:10 5 to deposit, along with other things like how long it took
09:11:13 6 to capture it and a bunch of other data.

09:11:16 7 Q. And so is this source code uploading the captured JPEG
09:11:21 8 check images to the bank?

09:11:21 9 A. It is.

09:11:22 10 Q. And what does Wells Fargo do when it receives those
09:11:25 11 check images?

09:11:26 12 A. All right. So this is on the bank side, and what I've
09:11:28 13 highlighted here is it takes that body data that comes in
09:11:31 14 and it unpacks it and it pulls out the front check image
09:11:37 15 and the back check image, and, again, those are both as
09:11:39 16 JPEGs that it pulls them out.

09:11:42 17 Q. And what happens after that?

09:11:42 18 A. What happens after that is it does something called a
09:11:46 19 memo post. And what a memo post is, is actually a deposit
09:11:52 20 transaction. And you'll see here I've highlighted check
09:11:56 21 deposit amount and front image and back image.

09:12:01 22 Q. And so memo post is how you get the actual money in
09:12:05 23 your bank account?

09:12:05 24 A. Yeah, this means you get your money.

09:12:08 25 Q. And so what happens on the user's phone at this point?

09:12:11 1 A. After this happens, then the bank sends back an okay, I
09:12:16 2 did it to the mobile app. And that's when this screen, the
09:12:19 3 confirmation screen pops up. The bank actually sends back
09:12:22 4 a confirmation code number, and you see that at the bottom
09:12:26 5 here.

09:12:26 6 Q. And so what did you conclude with respect to the last
09:12:29 7 claim element of Claim 1?

09:12:30 8 A. That's also present, so let's put a checkmark there.

09:12:34 9 Q. And so after looking at all these claim elements, what
09:12:38 10 did you conclude regarding Claim 1 of the '571 patent?

09:12:42 11 A. So after a lot of analysis that we went through
09:12:46 12 yesterday and today, I concluded that Claim 1, all the
09:12:50 13 elements are present in Wells Fargo's mobile system, so
09:12:53 14 Wells Fargo infringes Claim 1 of the '571 patent.

09:12:57 15 Now, it also -- it infringes it both literally,
09:13:02 16 where I showed each and every element is present, and also
09:13:05 17 the Doctrine of Equivalents, where I showed, hey, it also,
09:13:11 18 in addition to literal infringement, if you take Wells
09:13:14 19 Fargo's non-infringement theory, even by the Doctrine of
09:13:17 20 Equivalents, the screws equal the nails.

09:13:20 21 Q. And did you look at any other claims in the '571
09:13:25 22 patent?

09:13:25 23 A. Yeah. It looks like there's a lot to go through, but
09:13:27 24 here's the good news, we've done the heavy lifting so far.
09:13:31 25 So a lot of the evidence I just presented is going to make

09:13:34 1 going though the rest of the claims a lot easier.

09:13:36 2 I looked at Claims 2 and 3, 4, 5, and 6 -- we'll
09:13:40 3 go through them in these groups -- 9, and then 12 and 13.

09:13:43 4 Q. And so let's look at Claims 2 and 3. Can you describe
09:13:47 5 for the jury what is different in Claims 2 and 3 versus
09:13:50 6 Claim 1 that we just looked at?

09:13:52 7 A. As you heard your Honorable Judge Gilstrap say, there's
09:13:57 8 this concept of a dependent claim. That's a claim that
09:14:01 9 adds limitations to its parent claim. 2 and 3 are
09:14:07 10 dependent claims. So 2 is dependent on Claim 1 that we
09:14:10 11 just covered. The limitation it adds, I've highlighted
09:14:14 12 here, provide feedback, via the mobile device to a user of
09:14:20 13 the mobile device, regarding the image of the check.

09:14:23 14 So that's providing feedback. Remember that, get
09:14:26 15 closer, hold steady.

09:14:28 16 Now, 3 is dependent on Claim 2. So this is a
09:14:36 17 chain, Claim 1, Claim 2 dependent on 1, 3 dependent on 2.
09:14:41 18 And 3 adds to 2 that the feedback is provided if the image
09:14:45 19 fails to pass the monitoring criterion.

09:14:46 20 So -- and that's true, right? It only shows the
09:14:51 21 feedback if you haven't passed. After you pass, that's
09:14:53 22 when it snaps the picture and pops up that successful.

09:14:59 23 Q. And did the Mitek documentation say anything about this
09:15:02 24 type of feedback?

09:15:03 25 A. Yes, let's go back to that same document I talked about

09:15:06 1 awhile ago where it says Mitek MiSnap provides real-time
09:15:10 2 feedback to the end user until a suitable image is
09:15:14 3 detected. So that is Claim 2 and 3. But we also saw that
09:15:17 4 when I analyzed the code.

09:15:19 5 Q. Now, you mentioned get closer and hold steady. Are
09:15:24 6 there other examples of feedback used by the Wells Fargo
09:15:28 7 system?

09:15:28 8 A. Yes, it provides quite a few. I cataloged them in my
09:15:34 9 report as I went through the code. There's get closer, try
09:15:37 10 more light, try less light, center the front of the check,
09:15:44 11 center the back of the check. We saw this hold steady if
09:15:49 12 you drank too much coffee.

09:15:51 13 Use a darker background, move farther away. In a
09:15:56 14 couple of different cases it will say, reduce the angle.
09:15:59 15 That is if the slew angle or the rotation angle isn't
09:16:02 16 correct.

09:16:03 17 And then let's say you try to take a picture of
09:16:06 18 the check on your flowered tablecloth, it will say, use a
09:16:13 19 plain background because it can't find where the check is
09:16:15 20 in that background.

09:16:15 21 Q. Now, what's the relationship between the feedback
09:16:17 22 messages that appear on the screen and the monitoring
09:16:21 23 criterion that are being looked at for the check image?

09:16:24 24 A. So you'll see all the way on the left here I showed you
09:16:27 25 the monitoring criterion that corresponded to that

09:16:30 1 feedback.

09:16:30 2 So if you have low contrast, that's when it pops
09:16:33 3 up, this message use a darker background. If you have --
09:16:36 4 if you don't pass minimum padding, that is, it wants a
09:16:40 5 certain amount of area around the check, it will say, hey,
09:16:43 6 back up.

09:16:44 7 Q. And what do these different feedback messages look like
09:16:48 8 in the actual phone?

09:16:49 9 A. So there are -- because there's multiple versions I
09:16:51 10 looked at, somewhere in the middle of this, the look and
09:16:55 11 feel of the app, is what we call it, changed. So what's on
09:17:01 12 the right is the old look and feel where it will pop up the
09:17:05 13 message in a little bubble. And then they switched to the
09:17:08 14 rectangles, which is what you see on the left, which is the
09:17:10 15 rectangles we saw earlier in the video yesterday.

09:17:14 16 Q. Now, are these feedback messages provided before or
09:17:18 17 after the monitoring criteria are satisfied for a check
09:17:24 18 image?

09:17:24 19 A. Provided before.

09:17:25 20 Q. And why is that?

09:17:26 21 A. Because after you don't need to provide anymore
09:17:29 22 feedback, you've captured the image.

09:17:31 23 Q. And so the feedback is to help the user satisfy those
09:17:36 24 monitoring criterion?

09:17:37 25 A. Exactly.

09:17:37 1 Q. Now, what's the next set of claims in the '571 patent
09:17:42 2 that you looked at?

09:17:43 3 A. All right. So 4 adds to 3, and it says, the feedback
09:17:48 4 comprises instructions for the user to follow to obtain a
09:17:51 5 second image of the check, that is, it provides feedback to
09:17:56 6 take an image of the back of the check. We saw that.

09:17:58 7 It says the feedback is provided visually in the
09:18:01 8 field of view. Well, we saw that. We had the field of
09:18:04 9 view, and it pops up that rectangle or that little red
09:18:07 10 bubble I showed you.

09:18:08 11 And then 6 says, capturing the image of the check
09:18:13 12 is performed automatically without user intervention. And
09:18:16 13 that's what happens, right, this is the auto capture. So
09:18:19 14 it captures the image of the check after it passes the
09:18:22 15 monitoring criterion. User doesn't have to press a button
09:18:26 16 or do anything.

09:18:26 17 Q. Do we need to look at any evidence other than what
09:18:29 18 you've already talked about to figure out if Wells Fargo
09:18:32 19 uses Claims 4, 5, and 6?

09:18:34 20 A. No, we've already covered all the evidence, so luckily,
09:18:38 21 we don't have to go into any more code for this, and these
09:18:42 22 also are present in the Wells Fargo mobile app.

09:18:45 23 Q. And what's the next claim that you looked at?

09:18:50 24 A. Claim 9 is another independent claim. So an
09:18:55 25 independent claim, again, it's a different description of

09:19:00 1 the invention. It might have a slightly different take on
09:19:02 2 it.

09:19:04 3 What I've done here is I've highlighted things
09:19:07 4 where I would use the same evidence as I used to show
09:19:11 5 Claim 1. So the non-transitory computer-readable medium,
09:19:16 6 you remember that, right? And monitoring image of the
09:19:20 7 check in the field of view of the camera with respect to a
09:19:22 8 monitoring criterion. Capture the image of the check using
09:19:26 9 the camera when the image of the check in the field of view
09:19:30 10 passes the monitoring criterion. We spent a lot of time on
09:19:33 11 that. And transmit the image of the check from the mobile
09:19:37 12 device to a deposit system. We showed you that.

09:19:39 13 Q. And is it your opinion that those claim limitations are
09:19:45 14 present in Claim 9 for the same reasons you described for
09:19:48 15 Claim 1?

09:19:48 16 A. Yes, for the same mobile reasons I showed you in
09:19:51 17 Claim 1, these are present.

09:19:52 18 Q. And what about the remainder of Claim 9?

09:19:54 19 A. All right. So there's, initialize a software object on
09:19:59 20 a mobile device operated by a user, the software object
09:20:03 21 configured to communicate with a camera.

09:20:07 22 Now, what's a software object? That's a program.
09:20:11 23 Okay. And then at the bottom, deposit system configured to
09:20:14 24 clear the check and deposit funds of the check into the
09:20:17 25 deposit account of the user.

09:20:19 1 Q. Now, does the Wells Fargo system initialize a software
09:20:24 2 object to communicate with the camera?

09:20:25 3 A. Yes, it does.

09:20:27 4 Q. And what about the deposit system that you deposit the
09:20:31 5 check into, does that ultimately clear the check and
09:20:34 6 deposit funds?

09:20:34 7 A. Yeah, even though it wasn't required for Claim 1, I
09:20:38 8 showed you that part where it does that memo post, and
09:20:41 9 that's what this element is talking about.

09:20:43 10 Q. So did you ultimately conclude that Claim 9 was also
09:20:46 11 present?

09:20:46 12 A. Yeah, each and every element is present. So the Wells
09:20:52 13 Fargo mobile app infringes Claim 9 of the '571 patent.

09:20:55 14 Q. And what's the next set of claims that you looked at in
09:20:59 15 the '571 patent?

09:21:00 16 A. Well, the next ones are -- call out certain criteria.

09:21:06 17 12 calls out the monitoring criterion comprising light
09:21:09 18 contrast or light brightness of the image. In fact, if you
09:21:12 19 remember, I showed you yesterday the actual code that does
09:21:16 20 that. So it does actually do these.

09:21:20 21 I also found 13, the monitoring criterion
09:21:22 22 comprises skewing the image or warping the image. I showed
09:21:27 23 you -- in fact, it shows you feedback if you skew or warp
09:21:32 24 it. You know, it says: Straighten the camera. Or I think
09:21:35 25 it says: Decrease the angle.

09:21:38 1 Q. And so what did you ultimately conclude with respect to
09:21:43 2 infringement of Claims 1 through 6, 9, 12, and 13 of the
09:21:46 3 '571 patent?

09:21:46 4 A. So after all of the analysis I presented, I concluded
09:21:51 5 that the Wells Fargo mobile system infringes by a
09:21:56 6 preponderance of the evidence Claims 1 through 6, 9, 12,
09:22:01 7 and 13 of the '571 patent.

09:22:04 8 Q. Now, what did you look at in the '090 patent?

09:22:08 9 A. All right. The '090 -- remember that Mr. Bueche
09:22:14 10 described this as the grandchild of the '571. As the
09:22:19 11 grandchild, it -- it shares the same specification, it
09:22:23 12 shares the same inventors, but it has new claims.

09:22:26 13 So I looked at Claims 1 through 4, 7, and 10 of
09:22:31 14 this patent.

09:22:33 15 Q. And why don't you describe Claim 1 of the '090 patent
09:22:38 16 to the jury?

09:22:38 17 A. All right. So Claim 1 has several different items
09:22:43 18 here. You see a processor in communication with the image
09:22:47 19 capture device and presentation device, the processor
09:22:50 20 configured to. I showed you there was a processor. You
09:22:52 21 see a monitor -- a target document in the field of view of
09:22:56 22 the image capture -- whoops -- in the field of view of the
09:23:01 23 image capture -- image capture device with respect to a
09:23:08 24 monitoring criterion. This -- control the presentation
09:23:14 25 device to present feedback information describing

09:23:17 1 instructions for satisfying the monitoring criterion, that
09:23:19 2 was the same as -- that's -- that's Claims 2 and 3 of the
09:23:22 3 '571. That's that feedback information.

09:23:24 4 And determine whether the monitoring criterion is
09:23:26 5 satisfied based on the target document in the field of view
09:23:29 6 of the image capture device. That's -- that's going to use
09:23:34 7 the same evidence we presented for Claim 1 of the '571.

09:23:37 8 And then when the monitoring criterion is
09:23:39 9 determined to be satisfied, control the image capture
09:23:43 10 device to capture an image depicting the target document in
09:23:48 11 the field of view of the image capture device.

09:23:50 12 So that's that capture element of Claim 1 that we
09:23:54 13 talked about.

09:23:56 14 Q. So let me just step back a minute, Professor Conte.

09:23:59 15 Are you saying that some of these claim
09:24:04 16 limitations were already discussed essentially in the '571
09:24:06 17 patent?

09:24:06 18 A. I'm saying that the evidence in the '571 patent is
09:24:10 19 sufficient to show that these claim elements are present,
09:24:13 20 as well.

09:24:13 21 Q. And what about the first three elements of Claim 1, how
09:24:19 22 did you look at those?

09:24:20 23 A. Well, this talks about an image capture device, a
09:24:24 24 presentation device, and a processor in communication with
09:24:27 25 the image capture device and the presentation device.

09:24:30 1 Q. And did you find those in the Wells Fargo system?

09:24:32 2 A. Yes. In fact, the presentation device, for example, is
09:24:36 3 the screen of your -- your smartphone. So each of these is
09:24:39 4 present in the Wells Fargo mobile app.

09:24:45 5 Q. In the -- in the fourth claim element, it says:
09:24:49 6 Monitor a target document. Is that different from the '571
09:24:52 7 patent?

09:24:52 8 A. No, it's -- it's not different. In fact, the -- it's
09:25:01 9 just using a more general term, "target document," instead
09:25:04 10 of check.

09:25:05 11 Q. So in the '090 patent, it doesn't necessarily have to
09:25:09 12 be a check?

09:25:09 13 A. That's right. But if it is a check, it still infringes
09:25:14 14 Claim 1 of the '090.

09:25:15 15 Q. So what did you ultimately conclude with respect to
09:25:18 16 infringement of Claim 1 of the '090 patent?

09:25:19 17 A. Well, again, all the elements are present. So Claim 1
09:25:25 18 of the '090 is infringed by the Wells Fargo system.

09:25:29 19 Q. And what's the next set of claims in the '090 patent
09:25:32 20 that you looked at?

09:25:33 21 A. So these talk about feedback. Claim 2 adds: Present
09:25:37 22 feedback information by displaying written instructions on
09:25:41 23 the display screen.

09:25:42 24 So those are those bubbles, or in the older
09:25:45 25 version, that -- that red pop-up.

09:25:50 1 Then 3 adds: The written instructions request a
09:25:54 2 user to position the target document in the field of view,
09:25:58 3 such as center the front of the check or move back.

09:26:01 4 And 4, then, is to present the feedback
09:26:06 5 information when the monitoring criterion is determined to
09:26:08 6 not be satisfied.

09:26:10 7 Well, that's why you're presenting it. That's
09:26:12 8 when Wells Fargo's app presents it is you don't pass the
09:26:16 9 monitoring criterion. After you pass it, it stops, puts
09:26:19 10 the Post-it on the door, pops up that success with a check
09:26:24 11 box, packages up as a JPEG, and sends it to the bank.

09:26:29 12 Q. And so did you conclude that Claims 2, 3, and 4 of the
09:26:34 13 '090 patent were present in the Wells Fargo system?

09:26:35 14 A. Yes. For all the evidence that we've already seen,
09:26:38 15 they're present in the Wells Fargo system. And so Wells
09:26:41 16 Fargo infringes Claims 2, 3, and 4.

09:26:46 17 Q. And what about Claim 7 and 10 of the '090 patent?

09:26:50 18 A. All right. Let's -- let's look at 7. So 7 says:
09:26:54 19 Control the image capture device to capture the image
09:26:57 20 automatically upon determining the monitoring criterion.

09:27:00 21 We had a similar claim in the '571. And just as
09:27:06 22 there, yes, it does this automatically. The user doesn't
09:27:09 23 have to, after you pass the monitoring criterion, do
09:27:12 24 anything. It goes boom.

09:27:17 25 And then 10 says: Where the monitoring criterion

09:27:19 1 comprises whether the corner image depicting the target
09:27:22 2 document is detectable. And it does that, too. It will
09:27:26 3 say, hey, move back because it can't find the corners.

09:27:32 4 Q. And so what did you ultimately conclude with respect to
09:27:35 5 infringement of Claims 1 through 4, 7, and 10 of the '090
09:27:38 6 patent?

09:27:38 7 A. So for all the information that we went through
09:27:41 8 yesterday and today, Claims 1 through 4, 7, and 10 are also
09:27:46 9 element-by-element present in the Wells Fargo system, so
09:27:50 10 Wells Fargo, preponderance of the evidence, in my opinion,
09:27:56 11 infringes the '090 patent.

09:27:58 12 Q. Now, I'm going to return to something I think we saw
09:28:03 13 yesterday. Could you describe for the jury what the chart
09:28:08 14 on your Slide 112 is showing?

09:28:10 15 A. All right. So these are all the different versions of
09:28:14 16 the software that were produced in Dallas. And I looked
09:28:18 17 at -- and you saw Version 3.7.1. And, by the way, all of
09:28:25 18 these are in the Defendant's Exhibit 11. Remember, the
09:28:30 19 Defendant is who produced this code.

09:28:33 20 Q. And so what conclusion did you reach with respect to
09:28:37 21 infringement of the '571 and '090 claims that you just
09:28:41 22 walked through for the other versions, the earlier versions
09:28:44 23 of the Wells Fargo application?

09:28:46 24 A. Okay. So I found that the same functionality was
09:28:52 25 present in the Android Version 3.7. It was present in

09:28:56 1 Version 3.1.3 for both. It was present in the Android
09:29:01 2 Version 3.1.1.

09:29:03 3 The same functionality was present in Version
09:29:09 4 2.3.8 for both. The same functionality was present in
09:29:13 5 Version 2.3.7 for both. The same functionality was present
09:29:17 6 in Version 2.3.6 for both.

09:29:21 7 The same functionality was present in Version
09:29:26 8 2.3.1 for both. The same functionality was present in
09:29:29 9 Version 2.1.2 for both. And the same functionality was
09:29:33 10 present in Version 2.0.6, even though they came out a
09:29:37 11 little different time, for both.

09:29:38 12 Q. And so is it your opinion that all of the Wells Fargo
09:29:42 13 application versions you just referenced infringe the
09:29:46 14 asserted claims for the same reasons you discussed today
09:29:49 15 with respect to the 3.7.1 version?

09:29:53 16 A. Yes, that's my opinion.

09:29:58 17 Q. Now, when you were reviewing all these different
09:30:00 18 application versions, did you come across any differences
09:30:02 19 in how the functionality was implemented?

09:30:05 20 A. Well, let's start at the bottom. One difference that I
09:30:07 21 did not see is any difference in whether or not auto
09:30:10 22 capture was used. Auto capture is present in all versions.

09:30:14 23 But what happened was, as you move forward in
09:30:17 24 time, Wells Fargo added more monitoring criteria and deeper
09:30:22 25 monitoring. And they added more corrective feedback.

09:30:29 1 Q. And so how did the monitoring criteria used in the
09:30:32 2 Wells Fargo system change over time?

09:30:33 3 A. Well, here's all the examples called out in the patent
09:30:41 4 specification in the example system that the patent
09:30:44 5 specification describes.

09:30:46 6 When I looked at Versions 2.0.6 through 3.1.3, I
09:30:53 7 found almost all of these monitoring criteria were present.

09:30:57 8 When I moved on to Version 3.7.1, I found that
09:31:01 9 each and every one of them was present. Mind you,
09:31:04 10 Version 2.0.6 to 3.1.3 are still monitoring the check with
09:31:10 11 respect to criteria. They're still practicing the patent.
09:31:13 12 But over time, what they did was they added more, and I
09:31:16 13 imagine they added more, just to speculate, because they
09:31:19 14 wanted a better image.

09:31:20 15 Q. And is Version 3.7.1 the current version of the Wells
09:31:25 16 Fargo application?

09:31:26 17 A. It was the most recent version produced to me.

09:31:31 18 Q. In other words, if you go to the App Store and download
09:31:34 19 it, that's what you get?

09:31:35 20 A. I -- I haven't done that. I believe that either you
09:31:38 21 get that or you get a later version, but I believe that's
09:31:41 22 what you get now.

09:31:42 23 Q. Now, how has the corrective feedback changed over time?

09:31:45 24 A. Well, over time, you -- up to Version 3.1.3 -- from
09:31:56 25 2.0.6 to 3.1.3, you would get these messages: Get closer,

09:32:00 1 move farther away, reduce angle, try more light, try less
09:32:04 2 light.

09:32:05 3 And then starting in Version 3.7, they added to
09:32:09 4 that: Center front of check, center back of check, use
09:32:12 5 darker background, use plain background.

09:32:19 6 Q. And those new feedback messages, those come up when the
09:32:23 7 user is making a different kind of mistake?

09:32:26 8 A. That's right. When there's a different reason for not
09:32:30 9 passing the monitoring criteria.

09:32:31 10 Q. To what extent can Wells Fargo customize what
09:32:36 11 monitoring criteria and feedback are used?

09:32:37 12 A. In fact, they have full control here. And this shows
09:32:42 13 you some portion of the Wells Fargo app where they're
09:32:48 14 configuring the MiSnap app to control certain parameters
09:32:51 15 about feedback and the criterion it uses.

09:32:55 16 Q. Now, is there any option in the Wells Fargo system for
09:33:02 17 capturing check images other than auto capture?

09:33:04 18 A. There is. There's a shutter button provided, if you
09:33:07 19 want to use it.

09:33:08 20 Q. And do you know how often Wells Fargo's customers use
09:33:11 21 that manual capture option?

09:33:13 22 A. Well, when I averaged the data from -- I believe it was
09:33:19 23 2014 up through 2019, it was only 6 percent of the
09:33:25 24 successful checks use that manual feature. The vast
09:33:29 25 majority -- 94 percent of the successfully deposited checks

09:33:33 1 use the auto capture feature.

09:33:35 2 Q. And where did you get that data you referenced?

09:33:38 3 A. I believe it was data that was presented during

09:33:45 4 Ms. Lockwood-Stein's deposition. It's a large spreadsheet.

09:33:49 5 Q. So this is data that Wells Fargo provided?

09:33:52 6 A. Oh, yes, this is Wells Fargo's data in Plaintiff's

09:33:56 7 Exhibit 31.

09:33:57 8 Q. Now, in the versions of the Wells Fargo application

09:34:02 9 that you reviewed source code for, what was the default

09:34:07 10 capture mode set to in the application?

09:34:10 11 A. It was set to auto capture. And so what I'm showing

09:34:14 12 here is the code that you could use if you wanted to change

09:34:18 13 that parameter. Auto capture is when that mode is 2.

09:34:26 14 Q. And so it -- would it be possible for Wells Fargo to

09:34:28 15 disable auto capture?

09:34:29 16 A. Yes. This is Mr. Makoto Jitodai who is an engineer at

09:34:36 17 Wells Fargo. And he was asked: Okay. And so Wells Fargo

09:34:39 18 can change that one parameter to allow manual capture only

09:34:43 19 in the mobile deposit product; is that correct?

09:34:47 20 And he said: That's correct on the iOS system.

09:34:50 21 Q. Did he say anything about the Android system?

09:34:52 22 A. And then he was asked the same question about Android,

09:34:55 23 and he said: Yes, that's correct there too.

09:34:57 24 So all they've got to do is turn off the auto

09:35:00 25 capture feature and change this one thing.

09:35:02 1 Q. Now, in the Wells Fargo application versions that you
09:35:05 2 reviewed, was the auto -- or was the capture mode, excuse
09:35:10 3 me, ever set to anything other than auto capture?

09:35:13 4 A. No.

09:35:15 5 Q. Thank you, Professor Conte.

09:35:19 6 MR. ROWLES: Your Honor, I pass the witness.

09:35:21 7 THE COURT: All right. Cross-examination by the
09:35:22 8 Defendant.

09:35:24 9 MR. MELSHEIMER: Thank you, Your Honor.

09:35:24 10 May I -- may my colleague approach the witness
09:35:27 11 with some witness binders?

09:35:29 12 THE COURT: You have leave to approach the
09:35:30 13 witness.

09:35:35 14 MR. MELSHEIMER: And we'll also provide those to
09:35:38 15 counsel, Your Honor.

09:35:38 16 THE COURT: That's fine.

09:35:38 17 CROSS-EXAMINATION

09:35:56 18 BY MR. MELSHEIMER:

09:35:56 19 Q. Good morning, Dr. Conte, how are you, sir?

09:35:59 20 A. Good, how are you?

09:35:59 21 Q. I'm well. I want to start out by seeing if there are
09:36:02 22 some things you and I can agree about, all right?

09:36:04 23 A. Okay.

09:36:05 24 Q. So you did a report in this case, correct?

09:36:08 25 A. Yes.

09:36:08 1 Q. And you understood that it was very important that your
09:36:10 2 report contain all the opinions that you might have to
09:36:13 3 offer this jury, correct?

09:36:15 4 A. Yes.

09:36:17 5 Q. You made sure that your report was accurate, right?

09:36:20 6 A. To the -- to the best of my abilities, I did.

09:36:24 7 Q. Sure.

09:36:24 8 A. I know there's some typos and other things, but to the
09:36:27 9 best of my ability.

09:36:28 10 Q. I apologize. I'm not criticizing you about any typos,
09:36:31 11 sir. We won't talk about that today. But you understood
09:36:34 12 that you wanted to get it right?

09:36:35 13 A. Yes.

09:36:35 14 Q. And because you wanted to give notice to Wells Fargo
09:36:41 15 what your opinions were about, for example, how the source
09:36:44 16 code worked, true?

09:36:45 17 A. True.

09:36:46 18 Q. Okay. Now, you know there's someone named Dr. John
09:36:51 19 Villasenor who is going to testify on behalf of Wells
09:36:54 20 Fargo, correct?

09:36:55 21 A. That's what I've heard.

09:36:57 22 Q. And you understand that he's a highly qualified person
09:37:01 23 just like yourself that reads and understands code, right?

09:37:05 24 A. I don't have any reason to doubt that.

09:37:07 25 Q. Well, you've -- you've seen his report, right?

09:37:10 1 A. Yes.

09:37:11 2 Q. You know that he's a professor at a very prestigious
09:37:15 3 university just like you are, right?

09:37:17 4 A. Yes.

09:37:17 5 Q. He teaches computer code and source code to students
09:37:22 6 just like you do, right?

09:37:23 7 A. Yes.

09:37:24 8 Q. He has a Ph.D. just like you do, right?

09:37:28 9 A. Yes.

09:37:28 10 Q. Okay. And you don't have -- as you just told the jury,
09:37:31 11 you don't have any reason to believe that he's not
09:37:34 12 qualified, honest, or a reliable person just like you
09:37:37 13 believe yourself to be, true?

09:37:38 14 A. I have no reason.

09:37:39 15 Q. And it's fair, isn't it, sir, that you and
09:37:43 16 Dr. Villasenor have completely different views about some
09:37:47 17 of the key issues in this case, right?

09:37:50 18 A. That's my understanding.

09:37:52 19 Q. I mean, you understand that he's going to come and
09:37:55 20 testify later, because you've read his report, where he has
09:37:58 21 a different view than you do about how this source code
09:38:02 22 works, right?

09:38:02 23 A. That's not quite my understanding, no.

09:38:05 24 Q. Well, you understand that he believes or he will
09:38:08 25 testify that, for Wells Fargo, the Mitek software, the

09:38:15 1 capturing occurs first and then the monitoring; you
09:38:18 2 understand that's what he's going to testify about?

09:38:20 3 MR. ROWLES: Your Honor, I object. He's asking
09:38:22 4 the witness to speculate about future testimony.

09:38:24 5 THE COURT: I'll sustain that.

09:38:25 6 Q. (By Mr. Melsheimer) You know that in Mr. --
09:38:29 7 Dr. Villasenor's report, he takes the opposite position you
09:38:34 8 do about when the capturing occurs and when the monitoring
09:38:38 9 occurs; is that fair?

09:38:39 10 MR. ROWLES: Your Honor, same -- same objection.
09:38:41 11 Dr. Villasenor's report was in rebuttal to Professor
09:38:44 12 Conte's. This is just not part --

09:38:46 13 THE COURT: If Professor Conte's read his report
09:38:48 14 and knows what's in it, then he can respond to the
09:38:51 15 question, and I assume he has. So that's overruled.

09:38:54 16 A. Could you repeat, I'm sorry.

09:38:56 17 Q. (By Mr. Melsheimer) Absolutely, sir. You've read
09:38:59 18 Dr. Villasenor's report, right?

09:39:01 19 A. I have.

09:39:01 20 Q. You understand that he takes a different view than you
09:39:05 21 do about when capturing occurs and when monitoring occurs
09:39:10 22 in the Wells Fargo MiSnap product, fair?

09:39:13 23 A. I'd agree with that, yes.

09:39:16 24 Q. All right. Now, sir, there -- you were asked some
09:39:22 25 questions on your direct examination about some things I

09:39:26 1 told the jury in opening statement; you remember that?

09:39:30 2 A. Yes.

09:39:30 3 Q. And one of the things I told them was what's your --
09:39:35 4 what you were going to say capture was, right?

09:39:37 5 A. I recall you -- no, I don't recall you saying what I
09:39:42 6 was going to say.

09:39:43 7 Q. Well, do you recall me saying that I was going to
09:39:47 8 describe what the theory that USAA's expert was going to
09:39:51 9 offer about how capture works in the Mitek code?

09:39:56 10 A. I recall you summarizing what you believed my theory
09:40:00 11 would be.

09:40:00 12 Q. Okay. And you know where I got that?

09:40:03 13 A. No.

09:40:04 14 Q. I got it from your report.

09:40:07 15 A. Good.

09:40:07 16 Q. All right, sir. So let's -- can you look with me on --
09:40:11 17 now, you have two binders in front of you. We're not
09:40:14 18 supposed to block you or intimidate you. There's a lot of
09:40:17 19 material there. You may consult them, and I'm going to try
09:40:20 20 to direct you to the tabs of those binders when I have
09:40:24 21 questions about documents or other issues. Is that fair?

09:40:28 22 A. That's fair.

09:40:29 23 Q. So I am now on your report, sir, which is in Tab 3 of
09:40:38 24 the binder listed as Volume 1. Do you have that in front
09:40:41 25 of you, sir?

09:40:41 1 A. I do.

09:40:42 2 Q. Okay. And, in fact, if you go to Paragraph 412?

09:40:49 3 MR. MELSHEIMER: Do we have this, Mr. Barnes?

09:40:54 4 A. Give me a moment, sir.

09:41:04 5 Q. (By Mr. Melsheimer) Absolutely, sir.

09:41:05 6 A. Okay. I'm there.

09:41:06 7 MR. ROWLES: Your Honor, I object to the expert
09:41:09 8 report being published to the jury. Certainly he can ask
09:41:12 9 questions of the witness about it, but it's not in
09:41:14 10 evidence.

09:41:15 11 THE COURT: Is this for potential impeachment
09:41:18 12 purposes?

09:41:20 13 MR. MELSHEIMER: It is, Your Honor.

09:41:22 14 THE COURT: Overruled.

09:41:23 15 Q. (By Mr. Melsheimer) Now, sir, let me just direct you
09:41:30 16 to Paragraph 412. Are you with me?

09:41:39 17 A. Yes.

09:41:39 18 Q. Now, one of the things that you were asked about in the
09:41:43 19 opening statement is I said that you, the expert for USAA,
09:41:48 20 was going to say that the capturing occurs when the JPEG
09:41:53 21 image is created and transmitted to a server somewhere
09:42:00 22 else. Do you remember that?

09:42:00 23 A. I remember you saying that, sir.

09:42:03 24 Q. Okay. And just pause for a second. The servers that
09:42:09 25 we're talking about, those are Wells Fargo computers,

09:42:12 1 right?

09:42:12 2 A. That's my understanding, yes.

09:42:14 3 Q. And those are servers that can be located really

09:42:17 4 anywhere in the country where Wells Fargo would store data

09:42:22 5 about checking, right?

09:42:23 6 A. I'd assume so.

09:42:25 7 Q. Well, I mean, those are -- those are separate, aren't

09:42:28 8 they, sir, from, for example, the storage that you have on

09:42:31 9 your cell phone, right?

09:42:32 10 A. That's correct.

09:42:33 11 Q. So the check image that is used in the mobile app ends

09:42:41 12 up being sent to another computer called a server where

09:42:46 13 it's stored, right?

09:42:47 14 A. Yes.

09:42:53 15 Q. Okay. And you say in your report a JPEG check image is

09:43:01 16 created and transmitted via a communication network. Do I

09:43:04 17 have that right?

09:43:06 18 A. That's literally what I wrote.

09:43:07 19 Q. To Wells Fargo's servers where the check image is

09:43:12 20 stored, correct? Those are those servers you and I were

09:43:16 21 just talking about, right?

09:43:17 22 A. That's right.

09:43:18 23 Q. And then you say this -- you're referring to the

09:43:24 24 previous sentence, right?

09:43:26 25 A. That's in -- imprecise.

09:43:28 1 Q. This is the first -- am I reading it right?

09:43:35 2 A. Again, you were imprecise in your premise.

09:43:37 3 Q. Let me make sure we got the language right.

09:43:40 4 The first sentence says: A JPEG image is created
09:43:44 5 and transmitted, via communication network, correct?

09:43:48 6 A. It says: A JPEG image is created and transmitted, via
09:43:55 7 communication network.

09:43:56 8 Q. To Wells Fargo's servers?

09:43:59 9 A. Comma, to Wells Fargo's servers.

09:44:01 10 Q. Where the check image is stored, right?

09:44:02 11 A. Where the check image is stored.

09:44:04 12 Q. And then do you say, sir: This is the first -- and
09:44:09 13 only -- time that the check image is captured? Is that
09:44:14 14 what this sentence says?

09:44:15 15 A. That's literally what the sentence says. I disagree
09:44:18 16 with your interpretation.

09:44:19 17 Q. Well, I haven't said anything about my interpretation.

09:44:23 18 A. You did. You said --

09:44:24 19 THE COURT: Gentlemen.

09:44:26 20 THE WITNESS: I'm sorry, Your Honor.

09:44:26 21 THE COURT: Questions and answers. We don't need
09:44:28 22 a conversation back and forth. Counsel will ask a
09:44:31 23 question, the witness will answer the question. That's how
09:44:34 24 this is done.

09:44:34 25 THE WITNESS: My apologies. My apologies, Your

09:44:39 1 Honor.

09:44:39 2 Q. (By Mr. Melsheimer) Let's see if we can get squared
09:44:41 3 away on this. I read it correctly from your report,
09:44:44 4 correct?

09:44:44 5 A. You read the words correctly.

09:44:46 6 Q. And the words are what are in your report that you
09:44:49 7 wrote, correct?

09:44:50 8 A. The words are what I wrote, and they're in my report.

09:44:54 9 Q. You had ample opportunity to review and revise your
09:44:57 10 report in any way you wanted, correct?

09:44:59 11 A. Up until when I submitted it, yes.

09:45:04 12 Q. Up until you submitted it, no one said you couldn't
09:45:07 13 change anything or clarify something or modify it in any
09:45:10 14 way, correct?

09:45:11 15 A. That's -- that's right.

09:45:14 16 Q. You had the complete freedom to write and choose the
09:45:17 17 words that you wanted to convey the information you thought
09:45:20 18 was important, correct?

09:45:23 19 A. Yes, I did, of course.

09:45:35 20 Q. All right. Let's see if there's a few other things
09:45:37 21 that you and I can agree upon, sir.

09:45:39 22 I want to see if we can agree on what these
09:45:45 23 patents in this case did not invent. Are you with me?

09:45:50 24 A. I will do my best to answer your question.

09:45:52 25 Q. So these patents did not invent check deposit. That's

09:45:57 1 been around for a long time. Right?

09:45:59 2 A. That's my understanding.

09:46:01 3 Q. These patents did not invent mobile banking. Mobile

09:46:07 4 banking has been around for a while. True?

09:46:09 5 A. Yeah, I didn't make a determination one way or another.

09:46:15 6 Q. These patents did not invent check scanners, right?

09:46:21 7 A. Again, I didn't make -- I wasn't asked to make a

09:46:23 8 determination of whether or not these patents invented

09:46:26 9 that.

09:46:26 10 Q. Well, you know that check scanners that scanned in

09:46:30 11 information on checks and transmitted information, you know

09:46:32 12 that those have been around for a long time before these

09:46:34 13 patents, right?

09:46:35 14 A. Sure.

09:46:37 15 Q. I think we can agree that these patents did not invent

09:46:43 16 a new kind of smartphone, right?

09:46:44 17 A. I -- I believe that's correct.

09:46:47 18 Q. A new kind of camera?

09:46:50 19 A. I believe that's correct.

09:46:51 20 Q. Now, you, sir, are kind of what my mom used to call a

09:46:57 21 shutterbug.

09:46:59 22 A. Excuse me?

09:46:59 23 Q. You're kind of a -- well, you're kind of a camera guy,

09:47:03 24 aren't you?

09:47:03 25 A. I didn't mention anything about that.

09:47:05 1 Q. Well, I know you didn't mention anything about it. But
09:47:08 2 I've -- I've done a little -- like a good student, I've
09:47:10 3 done my homework on you. Aren't you kind of a camera
09:47:14 4 expert, or do I have that wrong?

09:47:15 5 A. I'm not an expert on cameras. I am an amateur
09:47:21 6 photographer.

09:47:21 7 Q. That's what I'm talking about. Okay. So you are
09:47:23 8 someone that has an interest in cameras. And you've
09:47:24 9 written about cameras in the past, haven't you, sir?

09:47:25 10 A. Sure.

09:47:26 11 Q. You have a blog where you talk about cameras and
09:47:31 12 photography, don't you?

09:47:32 13 A. No, I don't have a blog.

09:47:34 14 Q. Okay. You've -- but you've written on photography and
09:47:37 15 cameras, true?

09:47:37 16 A. I've participated in message boards, yes.

09:47:40 17 Q. Thank you. Not a new camera? Not a new processor in
09:47:44 18 these patents, right?

09:47:45 19 A. These patents do not disclose a new processor, that's
09:47:51 20 correct.

09:47:51 21 Q. These patents don't disclose a new way of displaying
09:47:55 22 information, correct?

09:47:57 23 A. I don't think that's quite accurate.

09:47:59 24 Q. Well, they don't describe a new kind of, for example,
09:48:06 25 screen display device?

09:48:08 1 A. Device?

09:48:09 2 Q. Yes.

09:48:10 3 A. No, they do not.

09:48:12 4 Q. And these patents did not -- do not purport to invent
09:48:19 5 any new hardware, true?

09:48:21 6 A. I didn't analyze that one way or the other.

09:48:24 7 Q. Well, do you think they did?

09:48:25 8 A. I don't think so, no.

09:48:26 9 Q. Okay. So you've talked about -- a little bit in your
09:48:33 10 own direct examination about -- you're actually a user of
09:48:37 11 the Wells Fargo app? Happily satisfied user, right?

09:48:41 12 A. Yes, I -- I deposit checks with the Wells Fargo app to
09:48:45 13 my Wells Fargo account myself.

09:48:46 14 Q. Well, you said, sir, I think, that you were a happy
09:48:49 15 customer. I thought you said that.

09:48:51 16 A. Yeah, I'm happy.

09:48:53 17 Q. Okay. All right.

09:48:53 18 A. Thank you.

09:48:54 19 Q. So you know that these patents -- so you are -- you've
09:48:58 20 been a user of mobile banking services, it sounds like?

09:49:02 21 A. Yes, I have.

09:49:03 22 Q. So you know that these patents didn't invent
09:49:07 23 features -- many of the features that are available in
09:49:10 24 mobile banking today, right?

09:49:12 25 A. Yeah, I didn't analyze one way or the other.

09:49:16 1 Q. Well, you didn't -- like, for example, you know that
09:49:20 2 these patents don't claim to have invented the ability to
09:49:23 3 check your account balance, right?

09:49:25 4 A. No, they do not.

09:49:27 5 Q. They don't claim to invent the ability to transfer
09:49:31 6 money between accounts on your cell phone, right?

09:49:34 7 A. I wouldn't quite say that, no.

09:49:38 8 Q. Well, you think that these patents do invent the
09:49:40 9 concept of transferring money from one account to another
09:49:46 10 on your cell phone?

09:49:47 11 A. Now, that question I can answer. No, they do not.

09:49:50 12 Q. Okay. I'll try to be more precise.

09:49:53 13 You agreed that these patents don't invent the
09:49:57 14 ability to report a lost or stolen debit or credit card?

09:50:04 15 A. I did not see that in the spec. I did not see that in
09:50:09 16 the claims.

09:50:09 17 Q. Or to change your PIN -- some mobile apps you can
09:50:12 18 change your PIN. These patents don't do that, right?

09:50:17 19 A. I did not see that in the spec or the claims, no.

09:50:19 20 Q. These patents don't address the idea of automatic bill
09:50:22 21 pay -- setting up an automatic bill pay on your cell phone,
09:50:25 22 right?

09:50:25 23 A. I'm not sure of that.

09:50:29 24 Q. Okay. What about paying by credit card via your cell
09:50:33 25 phone, do these patents claim that?

09:50:36 1 A. I didn't see that in the specification or claims, no.

09:50:38 2 Q. And you didn't talk about that with respect to any of
09:50:41 3 the testimony you've given today, right?

09:50:42 4 A. I did not.

09:50:44 5 Q. I've seen mobile banking apps that allow you to find
09:50:53 6 the nearest branch. I didn't hear you talk about that in
09:50:56 7 your testimony, right?

09:50:56 8 A. I did not.

09:50:57 9 Q. Or mobile -- mobile apps that allow you to -- to find
09:51:03 10 an ATM. Your -- your testimony didn't address that either,
09:51:06 11 did it, sir?

09:51:07 12 A. It did not.

09:51:08 13 Q. Or view -- or, for example, you don't claim that these
09:51:11 14 patents created the ability for a mobile bank customer to
09:51:15 15 view cleared checks on their cell phone, right?

09:51:20 16 A. I didn't determine that one way or the other.

09:51:22 17 Q. Or that the user of the -- of the mobile app could
09:51:26 18 apply for a new account, these patents don't talk about
09:51:29 19 that either, do they, sir?

09:51:30 20 A. I didn't find that in the spec or the claims.

09:51:34 21 Q. And just to be clear, you spent a lot of time looking
09:51:38 22 at this, right?

09:51:40 23 A. Yes.

09:51:41 24 Q. I mean, you're not someone that just is coming into
09:51:46 25 court without a lot of time spent on reviewing the claims,

09:51:49 1 the specifications, the source code, the documentation.

09:51:53 2 You spent hundreds of hours doing this, right?

09:51:56 3 A. That's accurate.

09:51:57 4 Q. So what I'm asking you, if you've looked for it or

09:52:01 5 found it, you say you didn't find it, I mean, you -- you

09:52:03 6 would be able to know if you'd found it, right?

09:52:05 7 A. Yes.

09:52:08 8 Q. These patents don't claim to invent fingerprint or face

09:52:19 9 ID that is a security mechanism that some banks have to

09:52:24 10 access accounts, right?

09:52:25 11 A. Again, that is not in the specifications or the claims,

09:52:29 12 to my knowledge.

09:52:29 13 Q. And, to your knowledge, these patents did not invent

09:52:34 14 the concept or idea of image analysis, analyzing an image?

09:52:38 15 A. I don't think that's entirely correct.

09:52:40 16 Q. Well, can we put it this way: The ability to analyze

09:52:47 17 an image predates these patents, right?

09:52:49 18 A. I'm sorry, your question is imprecise. I can't quite

09:52:57 19 answer.

09:52:58 20 Q. Okay. There were capabilities that computers and

09:53:03 21 scanners had, before the USAA patents, to analyze images of

09:53:07 22 things, right?

09:53:07 23 A. In general?

09:53:12 24 Q. In general.

09:53:16 25 A. Sure.

09:53:17 1 Q. USAA did not invent in these patents the criterion for
09:53:23 2 analyzing check images, right?

09:53:26 3 A. I wouldn't quite characterize that, no.

09:53:30 4 Q. Well, you wouldn't, but let me just -- let me get at it
09:53:34 5 this way. You understand that there are certain things
09:53:36 6 that have to be on a check for it to be processed by a
09:53:41 7 bank, correct?

09:53:41 8 A. Yes. I understand that from Mr. Calman.

09:53:44 9 Q. And -- well, but you -- but you know that anyway,
09:53:52 10 right? Not just from Mr. Calman. You know that as just
09:53:54 11 a -- as a person who has written and deposited checks,
09:53:56 12 right?

09:53:56 13 A. Well, yeah. But Mr. Calman told me a lot more about
09:54:00 14 it.

09:54:00 15 Q. Okay. You understand that the kind of information that
09:54:03 16 banks need to see on a check image -- or let's back up.

09:54:09 17 The kinds of things that a bank needs to see on a
09:54:11 18 check -- I mean, those are just standard things that --
09:54:15 19 that neither USAA nor Wells Fargo invented, right?

09:54:20 20 A. Yeah -- no, they didn't.

09:54:22 21 Q. Right. I mean, the things like the amount of the
09:54:27 22 check, the signature line, the -- the courtesy amount, the
09:54:30 23 address, the check number, all that stuff, that's not
09:54:33 24 something that -- that's something that all banks use
09:54:40 25 everywhere, true?

09:54:40 1 A. Yes.

09:54:41 2 Q. You talked a little bit about something called MICR,
09:54:46 3 and that's those funny -- I think you called them those
09:54:48 4 funny numbers on the check. That -- it's magnetic image
09:54:53 5 character reading, correct? Do I have that right --
09:54:57 6 recognition?

09:54:57 7 A. Recognition, I think, it is.

09:54:59 8 Q. Recognition, I'm sorry. Magnetic image character
09:55:02 9 recognition, because as you pointed out, those -- those
09:55:05 10 funny symbols or numbers on our checks, that's actually
09:55:09 11 magnetic ink, right?

09:55:10 12 A. I believe it was originally, yeah.

09:55:12 13 Q. And that was because there were ways of reading those
09:55:18 14 by a magnetic reader?

09:55:20 15 A. That's my understanding why -- I mean, why else would
09:55:23 16 they make it magnetic.

09:55:24 17 Q. And that's not something that was invented in these
09:55:28 18 patents, right?

09:55:29 19 A. No.

09:55:29 20 Q. Indeed, you even pointed out that -- that image
09:55:32 21 checking generally -- the notion of taking an image of a
09:55:36 22 check instead of a physical check, that really the MICR is
09:55:40 23 not as important because that image is not being -- the
09:55:46 24 image of the check -- there's no use for the magnetic ink,
09:55:50 25 fair?

09:55:50 1 A. I wouldn't quite characterize it that way.

09:55:56 2 Q. Okay. Well, the image of the check, when you take a
09:55:59 3 picture of it, you're not actually getting the magnet --
09:56:03 4 the magnetized symbols, are you, sir?

09:56:08 5 A. Again, I wouldn't quite characterize it that way.

09:56:12 6 Q. Okay. Well, grade my paper on this. What am I -- what
09:56:15 7 am I missing?

09:56:16 8 A. Well, you aren't getting -- I mean, they're very
09:56:17 9 strangely shaped numbers, and that's to make them easily
09:56:21 10 readable by character recognition.

09:56:23 11 Q. But the character reader doesn't read the magnetism; is
09:56:26 12 that right?

09:56:26 13 A. That's -- okay. Now you have an A.

09:56:29 14 Q. Thank you. Thank you. I want to get more than one
09:56:31 15 from you, sir.

09:56:32 16 A. Okay. Keep on going.

09:56:33 17 Q. All right. Thank you.

09:56:34 18 THE COURT: Let's go back to questions and
09:56:36 19 answers, gentlemen. You don't need to start complimenting
09:56:39 20 each other.

09:56:39 21 THE WITNESS: Yes, Your Honor.

09:56:44 22 MR. MELSHEIMER: Thank you, Your Honor.

09:56:45 23 Q. (By Mr. Melsheimer) Now, we're talking about check
09:56:47 24 images, sir, and I want to get to that because you know
09:56:49 25 that there is something called Check 21, right?

09:56:53 1 A. I know that from Mr. Calman, yes.

09:56:55 2 Q. And -- well, I -- I -- I mentioned this or referred to
09:56:59 3 it generally in my opening statement. Do you remember
09:57:02 4 that?

09:57:02 5 A. Yes, but I knew it before from Mr. Calman.

09:57:04 6 Q. Okay. And Check 21 was a law that was passed after
09:57:10 7 9/11 that allowed images of checks to be used to clear and
09:57:19 8 be processed instead of the paper checks. Do I have that
09:57:26 9 right?

09:57:26 10 A. I believe that's a rough characterization of it. It
09:57:28 11 was complicated, of course.

09:57:30 12 Q. Very complicated, but there were rules set by those --
09:57:34 13 by that law that allowed check images -- images of paper
09:57:40 14 checks to take the place of physical paper checks, as a
09:57:44 15 general matter, right?

09:57:45 16 A. That's my understanding, yes.

09:57:46 17 Q. There was a standard that came out of that called the
09:57:55 18 X9 Standard. Have you heard of that?

09:57:57 19 A. Again, I've heard of that from Mr. Calman.

09:57:59 20 Q. And the X9 Standard was not something that USAA came up
09:58:03 21 with, right?

09:58:04 22 A. No.

09:58:04 23 Q. That --

09:58:05 24 A. That was an industry standard, I believe.

09:58:08 25 Q. I apologize for cutting you off.

09:58:09 1 That standard was something that all the banks had
09:58:13 2 to follow if they wanted to use images to exchange among
09:58:19 3 and between banks for processing, as opposed to physical
09:58:23 4 paper checks, right?

09:58:25 5 A. That's my understanding, yes.

09:58:27 6 Q. Those standards which were set by law and by the
09:58:33 7 agreement of various banks, those standards involve things
09:58:39 8 like how clear the image has to be, correct?

09:58:41 9 A. Yes, I believe that's correct. I -- I -- again, I have
09:58:47 10 that here, but I don't recall all the different criteria.

09:58:50 11 Q. And I'm not going to ask you about all of them. But
09:58:53 12 just as a general matter, you know, there's standards like
09:58:56 13 what has to be visible, how visible it has to be, what
09:59:00 14 information has to be present before one bank will say,
09:59:05 15 yeah, I'll take that image and -- and accept it just like
09:59:08 16 it was a paper check. Do I have that right?

09:59:10 17 A. I believe that's correct, yes.

09:59:12 18 Q. So when you showed the jury a minute ago those
09:59:28 19 different monitoring criterion -- you remember that chart
09:59:35 20 that had the different monitoring criterion?

09:59:36 21 A. Yes.

09:59:37 22 Q. And you said that Wells Fargo had added some additional
09:59:45 23 monitoring criterion to its mobile deposit application over
09:59:51 24 time, right?

09:59:51 25 A. Yes, that's what I found.

09:59:53 1 Q. Now, you're not suggesting there's anything wrong with
09:59:56 2 Wells Fargo adding new monitoring criterion, right?

09:59:58 3 A. Not at -- no, of course, not.

10:00:00 4 Q. Right. Because that's just a function of making sure
10:00:04 5 that you get a useable image so it can actually go into the
10:00:11 6 banking system and be processed, right?

10:00:13 7 A. Yes, that's the goal.

10:00:16 8 Q. And those monitoring criterion, those aren't something
10:00:21 9 that the Plaintiff in this case invented, right?

10:00:23 10 A. I would not characterize it that way.

10:00:27 11 Q. Well, let me see if I can characterize it better for
10:00:30 12 you.

10:00:31 13 The monitoring criterion that are described in the
10:00:34 14 specification of the patent, those are things that are
10:00:37 15 well-known in the industry for determining when a check
10:00:43 16 image will be, in fact, useable, correct?

10:00:47 17 A. I, again, wouldn't quite characterize them that way,
10:00:50 18 sorry.

10:00:51 19 Q. All right. You know that one of those criterion, for
10:00:55 20 example -- well, tell me, what is -- let's -- let's do it
10:00:59 21 this way.

10:01:00 22 What is one of the monitoring criterion that
10:01:02 23 you've identified?

10:01:04 24 A. Skew angle.

10:01:05 25 Q. Skew angle. Okay. So is that simply the angle of the

10:01:12 1 check in the picture?

10:01:13 2 A. It's a little more complicated, but, generally, yes.

10:01:18 3 Q. Okay. And so that's something that I'm gathering that

10:01:21 4 if you -- if you have a picture of a check and it's, you

10:01:27 5 know, a skew, so to speak, it might not be readable or

10:01:31 6 processable by the bank, right?

10:01:32 7 A. My understanding -- that isn't quite my understanding,

10:01:40 8 no, sir.

10:01:40 9 Q. Well, tell me what it is. Tell me what your

10:01:42 10 understanding is.

10:01:43 11 A. My understanding is that that enhances the probability

10:01:45 12 of the bank to be able to process it, to minimize skewing.

10:01:49 13 Q. To -- to -- oh, so to minimize the angle at which the

10:01:54 14 image is presented to the check -- presented to the bank,

10:02:00 15 that's something that will enhance the probability that the

10:02:03 16 check is good to go, right?

10:02:07 17 A. That it will be deposited, yes.

10:02:09 18 Q. Successfully deposited?

10:02:11 19 A. I believe that's exactly what -- what the patent says.

10:02:14 20 Q. Okay. And, of course, that sort of thing is something

10:02:17 21 that all banks that do mobile deposit -- or that do imaging

10:02:23 22 have to be aware of, right?

10:02:25 23 A. I haven't looked at other imaging systems, but I'd

10:02:29 24 assume that you wouldn't want aggressive skew.

10:02:31 25 Q. Well, sir, again, and what I'm really getting at here

10:02:34 1 is these --

10:02:38 2 MR. MELSHEIMER: May I have one moment, Your
10:02:40 3 Honor?

10:02:40 4 THE COURT: You may.

10:02:50 5 MR. MELSHEIMER: Thank you, Your Honor. While
10:02:52 6 we're -- while we're getting that -- oh, I think.

10:02:56 7 THE WITNESS: No, not that one.

10:02:57 8 Q. (By Mr. Melsheimer) Is this the one you used, sir?

10:02:59 9 A. No.

10:03:00 10 MR. MELSHEIMER: I think this may be -- I
10:03:04 11 apologize, Your Honor. If we might have just a moment.

10:03:07 12 Please, thank you.

10:03:12 13 Q. (By Mr. Melsheimer) But while we're -- while we're on
10:03:14 14 this, have you seen this slide before?

10:03:15 15 A. Yes, I prepared it.

10:03:16 16 Q. Okay. So, I'm sorry, I thought I asked you is this one
10:03:20 17 of the ones you used. Is it not one of the ones you showed
10:03:23 18 the jury?

10:03:23 19 A. This is one of the ones that I showed the jury. I
10:03:26 20 believe this isn't the one you're asking for.

10:03:27 21 Q. You're trying to get ahead of me, sir.

10:03:30 22 A. I shouldn't, but yes.

10:03:31 23 Q. But in any event, these are some monitoring criterion
10:03:34 24 here on the left here, correct?

10:03:36 25 A. Yes, they are.

10:03:37 1 Q. Low contrast, that means there's not the right
10:03:41 2 lighting, right?

10:03:44 3 A. That's one way to interpret it.

10:03:47 4 Q. Minimum padding, skew angle, rotation angle,
10:03:51 5 background, these are all things that you have to be aware
10:03:54 6 of in taking --

10:03:58 7 MR. MELSHEIMER: If you could leave that up for
10:04:01 8 just a second. I'm sorry. Thank you, Mr. Barnes.

10:04:05 9 Q. (By Mr. Melsheimer) These are all things you'd have to
10:04:07 10 be aware of in taking an image of a check in any system,
10:04:12 11 right? Whether it's a mobile system or whether you're
10:04:14 12 scanning in checks from your home office or whatever -- if
10:04:18 13 you -- to process an image, you have to be aware of things
10:04:21 14 like contrast and skew angle and things of that nature,
10:04:25 15 true?

10:04:25 16 A. You would have to be aware of those items, yes.

10:04:51 17 Q. PX-2.118 is -- so let's be clear, you said those
10:04:59 18 monitoring criterion are patented; is that what you said,
10:05:02 19 sir?

10:05:02 20 A. No, that's not accurate.

10:05:03 21 Q. Okay. Well, that's what the slide says.

10:05:05 22 A. The monitoring criteria -- the monitoring criteria
10:05:09 23 used -- patented monitoring criteria used, they're used.
10:05:13 24 The monitoring criteria are used.

10:05:15 25 Q. Well, so I -- again, so it says more patented

10:05:21 1 monitoring criteria used. That's what it says?

10:05:23 2 A. I might have been imprecise giving the title.

10:05:27 3 Q. Okay. So and, again, I'm not fussing at you about

10:05:30 4 that, sir. I just want to make sure you and I are

10:05:33 5 communicating.

10:05:34 6 A. Sure.

10:05:34 7 Q. So you acknowledge that the monitoring criteria on the

10:05:39 8 left-hand side, those aren't patented?

10:05:41 9 A. I don't believe it was construed in this case, so, no.

10:05:51 10 Q. And so what you're saying is, well, you know, you --

10:05:55 11 you might have written something that turned out to be a

10:06:00 12 little imprecise or even incorrect, right? It happens.

10:06:03 13 A. No, that's not at all what I was saying.

10:06:05 14 Q. Well, did you write this?

10:06:07 15 A. I did.

10:06:08 16 Q. We know that the things listed on the left, the

10:06:14 17 skewing, the warping, the corner detection, the MICR line

10:06:17 18 detection, let's focus just on that -- that one, sir.

10:06:20 19 The MICR line detection, okay? MICR lines have

10:06:27 20 had to be detected and readed as long as there has been

10:06:32 21 MICR lines?

10:06:33 22 MR. ROWLES: Your Honor, may we approach?

10:06:34 23 THE COURT: Approach the bench.

10:06:35 24 (Bench conference.)

10:06:44 25 MR. ROWLES: Your Honor, I feel that we're getting

10:06:46 1 into issues of validity and whether these monitoring
10:06:50 2 criteria were known in the art, which is not relevant to
10:06:52 3 any of the issues remaining in the case.

10:06:54 4 THE COURT: What is the relevance?

10:06:55 5 MR. MELSHEIMER: Your Honor, first of all, it goes
10:06:56 6 to the scope of the -- the improvement of the invention
10:07:01 7 over the prior art, which is a hundred percent relevant to
10:07:04 8 Georgia-Pacific factors of damages. So we're entitled to
10:07:07 9 bring out what these patents invented, what they didn't
10:07:10 10 invent, and what already existed.

10:07:12 11 He's put up a slide that says patented monitoring
10:07:16 12 criteria. He's already said they're not patented. I think
10:07:18 13 I'm entitled to explore that. I'll move along, but I think
10:07:21 14 I'm entitled to ask a couple more questions along this
10:07:24 15 line.

10:07:24 16 THE COURT: Well, we've spent a lot of time
10:07:26 17 talking about what the patents aren't. Seems to me we
10:07:29 18 ought to be talking about what the patents are.

10:07:32 19 MR. MELSHEIMER: We will do -- we will absolutely
10:07:33 20 be doing that, Your Honor, but I do believe --

10:07:35 21 THE COURT: How much more cross timewise do you
10:07:38 22 think you have, Mr. Melsheimer?

10:07:38 23 MR. MELSHEIMER: Completely or -- or on this -- on
10:07:41 24 this issue, Your Honor?

10:07:42 25 THE COURT: No, completely.

10:07:44 1 MR. MELSHEIMER: Oh, I think I have another -- an
10:07:46 2 hour or so, Your Honor, probably.

10:07:48 3 THE COURT: Well, we're going to take a short
10:07:49 4 recess, and then when we come back, you can continue.

10:07:53 5 MR. MELSHEIMER: And I'm going to be very
10:07:54 6 efficient, Your Honor. I'm not trying to spend time. I
10:07:57 7 know what the Court wants us to do.

10:07:59 8 THE COURT: No, I'm not pushing you on your time,
10:08:02 9 and I'm not looking for any implication from you otherwise.

10:08:04 10 I just have had the jury in the box going on two
10:08:07 11 hours, and they need a recess.

10:08:09 12 MR. MELSHEIMER: Oh, understood.

10:08:10 13 THE COURT: And we're going to do that.

10:08:12 14 MR. MELSHEIMER: Understood.

10:08:13 15 THE COURT: There's merit to what both of you say.
10:08:19 16 This -- that's the problem in this area of the law. There
10:08:22 17 are factual things that relate to more than one theory.
10:08:26 18 And while this relates to potentially invalidity, it may
10:08:30 19 also intersect with one or more of the Georgia-Pacific
10:08:32 20 factors. But we have -- we have spent a lot of time on
10:08:38 21 this. I'm going to let you follow up with one or two more
10:08:42 22 questions on this and then move on, once we come back from
10:08:45 23 recess.

10:08:46 24 MR. MELSHEIMER: Your Honor, would you prefer I
10:08:47 25 just do that before the break so it's definitely done in a

10:08:50 1 minute or two? I'm happy to do it that way if you'd
10:08:53 2 prefer.

10:08:53 3 THE COURT: No, we'll just take a recess, and then
10:08:57 4 you can do it then.

10:08:58 5 MR. MELSHEIMER: Okay. Thank you, Your Honor.

10:08:58 6 THE COURT: Thank you, counsel.

10:09:00 7 (Bench conference concluded.)

10:09:00 8 THE COURT: Ladies and gentlemen, this examination
10:09:03 9 has considerable more time to go, and it's been over an
10:09:07 10 hour and a half since we started. We're going on two
10:09:10 11 hours. We're going to use this opportunity to take a short
10:09:12 12 recess.

10:09:13 13 If you will, simply leave your juror notebooks
10:09:16 14 closed and in your chairs. Follow all the instructions
10:09:19 15 I've given you while you're on recess, including not to
10:09:22 16 discuss the case with each other, and we'll be back shortly
10:09:25 17 to continue.

10:09:26 18 The jury's excused for recess at this time.

10:09:30 19 COURT SECURITY OFFICER: All rise.

10:09:30 20 (Jury out.)

10:25:21 21 THE COURT: Court's in recess.

10:25:24 22 (Recess.)

10:25:24 23 COURT SECURITY OFFICER: All rise.

10:25:25 24 THE COURT: Be seated, please.

10:25:25 25 Counsel, before I bring the jury back in, I

10:25:31 1 reviewed the current state of affairs with regard to the
10:25:35 2 parties' proposed final jury instructions and verdict form.
10:25:42 3 I'm persuaded that the Court would benefit by a renewed
10:25:46 4 effort on the part of the parties. I'm directing that you
10:25:51 5 jointly meet and confer and submit a revised and updated,
10:25:57 6 suggested final jury instruction and verdict form by noon
10:25:58 7 tomorrow.

10:25:59 8 All right. Let's bring in the jury.

10:26:26 9 COURT SECURITY OFFICER: All rise.

10:26:27 10 (Jury in.)

10:26:28 11 THE COURT: Please be seated.

10:26:31 12 We'll continue with the Defendant's
10:26:36 13 cross-examination of the witness. You may proceed,
10:26:39 14 counsel.

10:26:39 15 MR. MELSHEIMER: May it please the Court, Your
10:26:41 16 Honor.

10:26:41 17 Q. (By Mr. Melsheimer) Mr. -- Dr. Conte, we were talking
10:26:43 18 about these so-called monitoring criteria that are
10:26:46 19 important in any sort of image processing, when we left.
10:26:51 20 Do you -- do you remember that?

10:26:52 21 A. Yes, I do.

10:26:52 22 Q. And, of course, that's going to be important whether --
10:26:55 23 however the image is being captured. Whether it's being
10:26:58 24 captured by manual capture or auto capture or scanned into
10:27:02 25 a scanner, these sorts of things are going to be important

10:27:06 1 regardless. Do I have that right?

10:27:13 2 A. I wouldn't quite put it that way.

10:27:15 3 Q. Well, certainly when you're taking an image of
10:27:18 4 something, whether -- however you're taking it, whether it
10:27:22 5 be auto, manual, or scanning it in, you have to make sure
10:27:25 6 you have the right brightness, correct?

10:27:27 7 A. That's correct.

10:27:27 8 Q. You have to make sure the thing is positioned correctly
10:27:30 9 in the frame, true?

10:27:30 10 A. To some degree, yeah.

10:27:33 11 Q. You have to make sure it's not skewed or warped?

10:27:36 12 A. To some degree, yes.

10:27:38 13 Q. I'm just reading from your chart here, sir. You have
10:27:42 14 to have corner detection to make sure where sort of the
10:27:45 15 check or the image stops and the background starts, right?

10:27:48 16 A. Correct.

10:27:50 17 Q. And then we were talking just briefly before the break
10:27:53 18 about the MICR line, and I think you agreed with me that
10:27:57 19 that MICR is an old concept that's been on checks forever,
10:28:02 20 right?

10:28:02 21 A. Yes, I believe it has.

10:28:03 22 Q. And certainly it has -- still has some relevance to be
10:28:06 23 read in an image, correct?

10:28:10 24 A. Yes, I believe it does.

10:28:11 25 Q. But it's not relevant from the magnetic sense in an

10:28:15 1 image. I think we agreed on that. Right?

10:28:17 2 A. Yes, I think we settled there.

10:28:18 3 Q. All right. So, sir, let me go to another area where I
10:28:26 4 think you and I will have some agreements. And I -- it's
10:28:30 5 general principles of patent law, your understanding of
10:28:32 6 patent law. Are you with me?

10:28:34 7 A. Yes.

10:28:34 8 Q. Okay. So did you get a chance to see the video that
10:28:42 9 Judge Gilstrap played to the jury as part of the jury
10:28:44 10 selection process?

10:28:45 11 A. No, I did not.

10:28:47 12 Q. Have you ever looked at it?

10:28:48 13 A. No, I have not.

10:28:50 14 Q. Okay. Well, let me ask you some questions about the
10:28:52 15 substance of it and see if that -- that -- those questions
10:28:56 16 comport with your understanding. Are you with me?

10:28:59 17 A. Yes.

10:29:00 18 Q. All right. So you can agree that the claims, as the
10:29:07 19 video said, are the most important part of the patent,
10:29:11 20 right?

10:29:11 21 A. That's the property, yes.

10:29:12 22 Q. The claims are what gives the public notice of the
10:29:18 23 boundaries of the invention, right?

10:29:19 24 A. Yes.

10:29:24 25 Q. You heard me say in opening, I think, that the claims

10:29:26 1 are like the fence of the invention, right?

10:29:29 2 A. I wouldn't quite put it that way, but okay.

10:29:34 3 Q. Well, I'm asking you if you heard me say that?

10:29:35 4 A. Yes, I heard you say that.

10:29:37 5 Q. And is it -- are -- is it your understanding that it's

10:29:41 6 often that -- patent rights are often described as like

10:29:46 7 property rights where there are fences around various

10:29:49 8 people's different properties? Have you heard that analogy

10:29:52 9 before?

10:29:53 10 A. I heard that from you, sir.

10:29:54 11 Q. You've never heard it before that?

10:29:57 12 A. I heard it before, but I heard it from you.

10:29:59 13 Q. Okay. Now, you -- you also understand the concept that
10:30:02 14 once you get your claims, you can't change them, right?

10:30:09 15 A. Correct.

10:30:11 16 Q. You can't move the fence to a different piece of
10:30:15 17 property, to use my analogy, right?

10:30:23 18 A. I'm not sure I agree with your analogy. So maybe --

10:30:29 19 I'm not --

10:30:29 20 Q. Okay. Well, let me -- let me ask it a different way,
10:30:33 21 sir.

10:30:33 22 The claims define what the patent owner owns,
10:30:36 23 right?

10:30:36 24 A. Correct.

10:30:37 25 Q. And there's no doubt in your mind about that, because

10:30:40 1 you seem like you're hesitating, and I want to make sure
10:30:43 2 that I'm getting it right.

10:30:46 3 The claims define what the patent owner owns,
10:30:48 4 true?

10:30:49 5 THE COURT: Counsel, there's no need for you to
10:30:51 6 characterize before the jury how you perceive the witness's
10:30:55 7 answer to be.

10:30:56 8 MR. MELSHEIMER: Yes, Your Honor.

10:30:56 9 THE COURT: He -- that's just not proper. So
10:30:59 10 cease -- cease doing that, please. Ask your question
10:31:04 11 again.

10:31:04 12 MR. MELSHEIMER: Let me -- let me ask my -- thank
10:31:06 13 you, Your Honor.

10:31:06 14 Q. (By Mr. Melsheimer) There's no doubt in your mind that
10:31:09 15 the claims define what the invention is, true?

10:31:12 16 A. I'm an inventor of 40 patents, so I wouldn't quite
10:31:20 17 agree with that.

10:31:21 18 Q. Okay. So you think there's something else that defines
10:31:24 19 the invention -- the limits of the invention other than the
10:31:27 20 claims?

10:31:27 21 A. I'm not saying that.

10:31:30 22 Q. Okay. I want to make sure I understand what you are
10:31:33 23 saying.

10:31:34 24 The claims define the invention. Are we agreed on
10:31:37 25 that?

10:31:38 1 A. Claims in light of the specification.

10:31:42 2 Q. Well, if there's something in the specification that's
10:31:49 3 not in the claim -- are you with me?

10:31:52 4 A. Yes.

10:31:53 5 Q. The claim controls, right?

10:31:54 6 A. That's true.

10:31:56 7 Q. So, for example, if you had a specification that said
10:32:03 8 this invention could be A, B, C, and D, are you with me?

10:32:08 9 A. Yes, sir.

10:32:08 10 Q. And the claims said the invention is just B, C, and D,
10:32:17 11 you don't get to put A in the claim, do you, sir?

10:32:20 12 A. Not in that patent. There's a concept of continuation
10:32:31 13 and other things.

10:32:32 14 Q. Right. And -- that's a good point. I want to make
10:32:35 15 sure we're clear about that.

10:32:37 16 So you could later, if you wanted to, go back and
10:32:40 17 add claims as long as they were -- as long as the new
10:32:44 18 claims were supported by the original specification. Do I
10:32:48 19 have that right?

10:32:49 20 A. Yes.

10:32:49 21 Q. But you can't, in that patent, the single patent we're
10:32:54 22 talking about, you can't take something from the
10:32:57 23 specification and make it a claim element if it's not in
10:33:02 24 the claim itself. Can we agree on that?

10:33:08 25 MR. ROWLES: Your Honor, I object. We're getting

10:33:10 1 into patent law principles at this point.

10:33:17 2 THE COURT: I've given you a fair amount of
10:33:25 3 latitude here, Mr. Melsheimer. These are all legal
10:33:27 4 concepts, and the Court is going to be the sole source of
10:33:31 5 instructing the jury on what the law is.

10:33:32 6 I'm going to allow -- I'm going to allow the
10:33:35 7 witness to either agree or disagree with this question, but
10:33:37 8 then we need to move on. All right?

10:33:40 9 A. I'm sorry, Mr. Melsheimer, can you ask that again?

10:33:42 10 Q. (By Mr. Melsheimer) I certainly can.

10:33:44 11 MR. MELSHEIMER: Your Honor, might I ask the court
10:33:45 12 reporter to reread the last question so I don't just
10:33:48 13 summarize it?

10:33:48 14 THE COURT: All right. Let's do that.

10:34:05 15 (Court reporter read back the last question.)

10:34:05 16 A. So I think that's imprecise in my understanding of the
10:34:08 17 law. And, again, I'm not an attorney.

10:34:09 18 Q. (By Mr. Melsheimer) Well, can we agree that every word
10:34:16 19 in the claims is important?

10:34:17 20 A. Yes.

10:34:17 21 Q. And one of the words in the claims in this case is
10:34:22 22 "when," correct?

10:34:25 23 A. Yes.

10:34:26 24 Q. And, in fact, "when" is in every asserted claim in this
10:34:33 25 case, correct?

10:34:34 1 A. I believe it is, yes. Well, that's not accurate.

10:34:40 2 Every independent claim.

10:34:42 3 Q. And because the dependent claims hinge on the

10:34:51 4 independent claims, it's, in effect, in all the claims.

10:34:54 5 Can we agree on that?

10:34:55 6 A. Let me just check. I've got the claims here.

10:34:59 7 It's in the three independent claims, yes.

10:35:24 8 Q. So we're in agreement?

10:35:25 9 A. I believe so.

10:35:27 10 Q. Take a look at Volume 1, Tab 12, sir, which is the

10:35:33 11 Court's claim construction excerpt that is also in the jury

10:35:38 12 notebook at Pages 1 and 2.

10:35:47 13 A. Okay.

10:36:06 14 MR. MELSHEIMER: May I have a moment, Your Honor?

10:36:07 15 THE COURT: Take a moment, counsel.

10:36:28 16 Q. (By Mr. Melsheimer) So in --

10:36:29 17 MR. MELSHEIMER: Thank you, Your Honor.

10:36:29 18 Q. (By Mr. Melsheimer) So in Volume 1, Tab 12, sir --

10:36:33 19 MR. MELSHEIMER: Go ahead and pull that up,

10:36:35 20 Mr. Barnes.

10:36:35 21 Q. (By Mr. Melsheimer) -- so these are the -- these are
10:36:37 22 the different terms. And if you look at the very bottom,

10:36:45 23 we see the use of the word "when" in that claim -- in

10:36:48 24 Claim 6, correct? And then in the Court's construction,

10:36:57 25 and "when" is --

10:37:00 1 MR. MELSHEIMER: If you could pull that back up,
10:37:02 2 Mr. Barnes. Thank you.

10:37:03 3 Q. (By Mr. Melsheimer) "When" is defined as at or after
10:37:14 4 the moment. Do you see that, sir?

10:37:16 5 A. Yes.

10:37:17 6 Q. Okay. And if we look at -- so capture has to be --
10:37:35 7 can't be before. It has to be at or after. Can we agree
10:37:41 8 on that?

10:37:42 9 A. I wouldn't quite characterize it that way.

10:37:46 10 Q. Well, the Court -- have you used the Court's -- have
10:37:49 11 you used the Court's construction of "when"?

10:37:52 12 A. Religiously.

10:37:54 13 Q. And can we agree that the Court's construction of
10:37:57 14 "when" is at or after?

10:37:58 15 A. Yes.

10:37:59 16 Q. The Court's construction is not before. Can we agree
10:38:02 17 on that?

10:38:02 18 A. The Court's construction is at or after.

10:38:05 19 Q. Now, you understand that it's Wells Fargo's position
10:38:11 20 that it does not use the same timing as found in the patent
10:38:16 21 claims. And I know you disagree with it, but you
10:38:19 22 understand that's the Wells Fargo position, correct?

10:38:20 23 A. Yes, I understand that's their position. That's a
10:38:26 24 little imprecise description, but yes.

10:38:28 25 Q. And on direct, you took the jury through each and every

10:38:35 1 limitation of the various claims, right?

10:38:36 2 A. Yes.

10:38:36 3 Q. You did that because the Plaintiff bears the burden of
10:38:41 4 proof on each element, right?

10:38:43 5 A. That was what I was instructed to do.

10:38:45 6 Q. And you understand that meeting 95 percent of the
10:38:52 7 elements won't get it done; you have to meet all of them,
10:38:57 8 either literally or by equivalents, right?

10:38:59 9 A. That's my understanding, yes.

10:39:01 10 Q. And you heard my opening where I said, you know, a 95
10:39:06 11 is an A, probably at Georgia Tech, but it's a 0 in a patent
10:39:11 12 case, right? It's an F in a patent case?

10:39:18 13 A. I'm not going to speculate about Georgia Tech's grading
10:39:23 14 scale.

10:39:24 15 Q. 95 is generally an A in life, but it's an F in a patent
10:39:27 16 case. Can we agree on that?

10:39:29 17 A. By F you mean --

10:39:31 18 Q. No infringement?

10:39:32 19 A. No infringement? Okay. Yes.

10:39:36 20 Q. All right. You agree that to show infringement, USAA
10:39:45 21 has to rely on your analysis of the source code, right?

10:39:49 22 A. That's my understanding, yes.

10:39:51 23 Q. And something you said yesterday illustrates this well,
10:39:57 24 which is you described to the jury that you are a user of
10:40:03 25 the Wells Fargo app, right?

10:40:05 1 A. That's correct.

10:40:06 2 Q. And being a user of that app, seeing what it looks like
10:40:11 3 and how it interacts with the user, that wasn't enough to
10:40:16 4 allow you to come into court and give an opinion on
10:40:20 5 infringement, correct?

10:40:22 6 A. I wouldn't characterize it that way.

10:40:23 7 Q. Well, you did not -- well, let's talk about how you
10:40:28 8 were hired in this case. Are you with me?

10:40:30 9 A. Yes.

10:40:30 10 Q. You were hired by the lawyers for USAA?

10:40:36 11 A. Yes.

10:40:37 12 Q. And when --

10:40:38 13 A. Actually --

10:40:39 14 Q. They asked you to do -- did you understand you were
10:40:42 15 going to be doing ultimately an analysis of possible
10:40:46 16 infringement in this case?

10:40:50 17 A. Yes.

10:40:51 18 Q. And did you tell them when they contacted you, hey,
10:40:58 19 good luck. I don't have to look at anything else because
10:41:02 20 I'm a user of the app, and I can tell you it infringes?
10:41:06 21 You didn't tell them that, did you?

10:41:08 22 A. I don't recall telling them that, sir, no.

10:41:10 23 Q. Because you know, don't you, that you have to look at
10:41:14 24 the source code to see how something works on the inside,
10:41:18 25 true?

10:41:18 1 A. That's inaccurate, no.

10:41:23 2 Q. You didn't have to look at the source code to determine
10:41:25 3 how this program worked?

10:41:26 4 A. It was additional evidence, yes.

10:41:27 5 Q. You did look at the source code, though, right?

10:41:30 6 A. I did examine the source code in detail.

10:41:34 7 Q. Okay. You're good at reading it and writing it,
10:41:37 8 correct?

10:41:37 9 A. I would like to think I am, yes.

10:41:40 10 Q. Computers can only do what their source code tells them
10:41:46 11 to do, right?

10:41:47 12 A. That's not quite accurate.

10:41:48 13 Q. Well, a computer -- and let's take artificial
10:41:52 14 intelligence out of it, okay? If I want my computer to
10:41:57 15 draw a picture of a red head on my screen, if that's in my
10:42:01 16 mind, but the source code or the program says to draw a
10:42:05 17 picture of a person with brown hair, what's the computer
10:42:08 18 going to draw?

10:42:09 19 A. Well, in this scenario, I suppose the computer would
10:42:14 20 draw someone with brown hair.

10:42:15 21 Q. Well, you suppose?

10:42:16 22 A. Well, I don't have a lot of information about the
10:42:19 23 program here.

10:42:21 24 Q. Well, let me give you some more information. I want it
10:42:25 25 to be a person with red hair, in my mind. Are you with me?

10:42:30 1 A. Yes, sir.

10:42:30 2 Q. Okay. The source code in the computer directs the
10:42:35 3 computer to draw a person with brown hair. What color hair
10:42:42 4 is the person going to have?

10:42:43 5 A. In this scenario, and what I understand of how you're
10:42:48 6 describing it, the person would have brown hair.

10:42:50 7 Q. Because the code in that situation controls, right?

10:42:53 8 A. I wouldn't describe it that way.

10:42:55 9 Q. Well, you asked -- or USAA asked to see Mitek's auto
10:43:01 10 capture code in this case, correct?

10:43:04 11 A. I don't believe that was the request, sir.

10:43:08 12 Q. Well, did you look at some Mitek source code?

10:43:10 13 A. Yes, extensively.

10:43:11 14 Q. And there was also some Wells Fargo code, correct?

10:43:15 15 A. That's correct.

10:43:15 16 Q. So just let's take a minute to make sure we're -- we're
10:43:18 17 clear about how -- how this works.

10:43:20 18 THE COURT: Counsel, approach the bench, please.

10:43:29 19 (Bench conference.)

10:43:30 20 THE COURT: I'm concerned about Defendant's
10:43:36 21 repetitious statements that 90 percent is an F in patent
10:43:41 22 law. There was a slide that was offered the first day we
10:43:45 23 met in chambers -- Mr. Melsheimer was not present -- where
10:43:50 24 Defendants proposed putting 90 percent and an F in red like
10:43:57 25 a grade on a test paper on a demonstrative, and I

10:43:59 1 instructed both the F and the 90 percent to be taken off.

10:44:05 2 And --

10:44:05 3 MR. MELSHEIMER: And I understood that, Your
10:44:06 4 Honor.

10:44:06 5 THE COURT: And that was because I am concerned
10:44:10 6 that telling the jury that 90 percent precludes you from
10:44:13 7 finding an application of the Doctrine of Equivalents, that
10:44:16 8 it's a failing grade. And you've said that repeatedly.

10:44:20 9 I'm instructing you, Mr. Melsheimer, not to make a
10:44:23 10 reference to 90 percent or some specific percentage or
10:44:29 11 success rate as either being or not being a passing grade
10:44:33 12 because I believe it's an inaccurate representation of what
10:44:37 13 the Doctrine of Equivalents requires, and I believe it
10:44:41 14 contradicts the instructions I've given the jury on what
10:44:43 15 the Doctrine of Equivalents is.

10:44:44 16 So I want to be clear, I do not want to hear F
10:44:49 17 grade, 90 percent, or anything like that now or anywhere
10:44:52 18 throughout the rest of the trial, including the closing.

10:44:55 19 MR. MELSHEIMER: I'll do that, Your Honor. Thank
10:44:59 20 you.

10:44:59 21 MR. ROWLES: Thank you, Your Honor.

10:45:01 22 THE COURT: All right. Let's proceed.

10:45:02 23 (Bench conference concluded.)

10:45:03 24 THE COURT: Let's proceed, please.

10:45:05 25 MR. MELSHEIMER: Thank you.

10:45:05 1 Q. (By Mr. Melsheimer) Now, we were talking about the
10:45:09 2 different kinds of code associated with mobile deposit.
10:45:13 3 Are you with me?

10:45:14 4 A. Specifically the Wells Fargo-produced code.

10:45:21 5 Q. Well, we were talking about you had viewed some code
10:45:25 6 from Mitek, true?

10:45:26 7 A. That's my understanding, yes.

10:45:29 8 Q. You viewed also some Wells Fargo code?

10:45:34 9 A. I viewed code integrated into the Wells Fargo
10:45:36 10 application. It included Mitek code and Wells Fargo code.

10:45:39 11 Q. And that's kind of the point I want to make sure we --
10:45:42 12 we clarify.

10:45:46 13 This -- the mobile deposit software involves code
10:45:50 14 that Wells Fargo wrote on its own, true?

10:45:52 15 A. Yes.

10:45:54 16 Q. It also involves code that it integrated that it got
10:45:59 17 from a company called Mitek, right?

10:46:02 18 A. I would characterize it as a library, but, yes.

10:46:06 19 Q. And the Wells Fargo code involves a lot of different
10:46:14 20 things that don't have anything to do with the issues that
10:46:16 21 we're here in court about today, right?

10:46:20 22 A. Yeah, I did not evaluate the other areas.

10:46:22 23 Q. And because you have to be able -- because we're
10:46:27 24 talking about, essentially, auto capture in a particular
10:46:32 25 way of a check for deposit, right?

10:46:35 1 A. I wouldn't quite characterize it that way.

10:46:39 2 Q. But that's the general subject matter, right?

10:46:42 3 A. Auto capture is.

10:46:43 4 Q. Right. And there's a lot of other stuff that goes into
10:46:48 5 the Wells Fargo mobile banking application that doesn't
10:46:51 6 involve that, true?

10:46:52 7 A. Yes.

10:46:53 8 Q. So you had to look at, because of how the code was used
10:47:00 9 together, how the library was used together, you had to
10:47:03 10 look at both materials that you understood to have been
10:47:06 11 created by Mitek and then material that you understood to
10:47:10 12 have been created by Wells Fargo. Do I have that right?

10:47:13 13 A. That I understood -- I -- I didn't make a determination
10:47:17 14 of who created what, sir.

10:47:19 15 Q. Okay. But you know there's sort of the Wells Fargo
10:47:22 16 piece of the code and then the Mitek piece of the code; is
10:47:26 17 that accurate?

10:47:26 18 A. Sir, this code was -- was produced to me as the
10:47:30 19 Wells Fargo application.

10:47:31 20 Q. And you know that it receives some of that code from a
10:47:37 21 company called Mitek, fair?

10:47:38 22 A. That's fair.

10:47:39 23 Q. You personally spent many hours reviewing the code,
10:47:49 24 true?

10:47:49 25 A. Yes.

10:47:50 1 Q. But you had a lot of help, didn't you?

10:47:52 2 A. I employed a team of two programmers. I did not employ
10:47:57 3 them. Let me be clear. The attorneys for USAA employed
10:48:03 4 them.

10:48:03 5 Q. And Wells Fargo made -- as the Defendant in this case,
10:48:08 6 Wells Fargo made that code available actually down the hall
10:48:14 7 from my office in Dallas; isn't that right?

10:48:17 8 A. Was it? Okay. Thanks for providing coffee.

10:48:20 9 Q. You're welcome. You were there a couple of days --

10:48:24 10 THE COURT: Let me just stop. I don't have any
10:48:27 11 problem with people being friendly in their conversation.
10:48:30 12 But these cute little comments just don't have any place in
10:48:33 13 a jury trial.

10:48:34 14 And I'm hearing them from both directions. Let's
10:48:37 15 just have a straightforward question-and-answer session as
10:48:40 16 the Rules of Civil Procedure require. Okay?

10:48:43 17 THE WITNESS: Yes, Your Honor.

10:48:44 18 THE COURT: That's what I expect. Let's proceed.

10:48:46 19 Q. (By Mr. Melsheimer) You were only there for two days,
10:48:53 20 but, in fact, your reviewers -- or the reviewers that you
10:49:00 21 were working with -- let me rephrase that.

10:49:03 22 You were not there the whole time that your
10:49:07 23 reviewers were there, correct?

10:49:09 24 A. I was not.

10:49:10 25 Q. You came multiple occasions to review the source code

10:49:15 1 in person, true?

10:49:16 2 A. Yes.

10:49:17 3 Q. You also knew that the reviewers were there working and
10:49:21 4 reviewing the source code when you were not there?

10:49:24 5 A. I don't think that's an accurate description.

10:49:26 6 Q. The reviewers were only there when you were there?

10:49:29 7 A. No, that's not -- that's not true.

10:49:32 8 Q. Okay. There were reviewers that were -- that had been
10:49:36 9 hired by someone else that were there to review source
10:49:39 10 code, true?

10:49:39 11 A. I think that's inaccurate.

10:49:44 12 Q. What were the two gentlemen -- what were the two
10:49:51 13 gentlemen doing in the office when the source code was
10:49:54 14 produced, in your knowledge?

10:49:55 15 A. They were sifting through it and cataloging it.

10:50:02 16 Q. Sifting -- what was the other word you used?

10:50:05 17 A. And cataloging.

10:50:06 18 Q. Okay. And cataloging. Okay. That's not reviewing?

10:50:10 19 A. That's -- oh, I see, that will be minimally reviewing,
10:50:15 20 yes.

10:50:16 21 Q. So they were sifting and cataloging, what you call
10:50:20 22 minimally reviewing, when you were not there, true?

10:50:23 23 A. True.

10:50:26 24 Q. Do you know how much time they spent doing that?

10:50:30 25 A. I don't know the figure off the top of my head, but I'm

10:50:35 1 sure it was more than a hundred hours.

10:50:36 2 Q. You think you spent about 40 hours or so doing that, or
10:50:40 3 is it more than that?

10:50:41 4 A. About 40 hours in Dallas. That's -- that's about
10:50:45 5 accurate.

10:50:45 6 Q. You have previously described the review of source code
10:50:52 7 as laborious. Do you agree with that?

10:50:59 8 A. Yes, it is.

10:50:59 9 Q. It's laborious, and it -- let's break that apart.

10:51:03 10 It's laborious because it involves a line-by-line
10:51:07 11 review at times, true?

10:51:08 12 A. I wouldn't characterize it that way.

10:51:13 13 Q. Well, it reviews looking at lines of code, true?

10:51:17 14 A. That's correct.

10:51:19 15 Q. It -- it involves using your mental processes and your
10:51:24 16 knowledge to understand what that code is doing or meaning,
10:51:29 17 true?

10:51:30 18 A. True.

10:51:33 19 Q. And that's what you mean by laborious?

10:51:37 20 A. I don't recall saying the word, but that -- it is
10:51:43 21 laborious.

10:51:44 22 Q. Well, the code is what tells you how the processor
10:51:50 23 works; isn't that right?

10:51:52 24 A. I wouldn't characterize it that way, no.

10:51:54 25 Q. You don't view code as telling the processor how to

10:51:58 1 operate?

10:52:00 2 A. That is a different -- code does tell the processor
10:52:08 3 what to do.

10:52:08 4 Q. Okay. So I said code tells the processor -- processor
10:52:13 5 how to work. You -- you're more comfortable saying, code
10:52:17 6 tells the processor what to do. Do I have that right?

10:52:21 7 A. Yes.

10:52:21 8 Q. And, in fact, if there is ever a dispute or a
10:52:44 9 disagreement between what someone might have said in a
10:52:47 10 descriptive document and the code, the code is going to
10:52:52 11 trump, correct?

10:52:54 12 A. Hypothetically, yes.

10:52:55 13 Q. Well, haven't you, in fact, testified to that very
10:53:00 14 statement before, sir?

10:53:04 15 A. I don't recall testifying whether or not, but I would
10:53:15 16 say that if in the hypothetical the document didn't match
10:53:18 17 the code, then I would rely on the document -- I mean, the
10:53:21 18 code.

10:53:21 19 Q. Sir, if you would, just so we're on the same page, if
10:53:27 20 you'd turn to Volume 2 of your binder, and go to Tab 16.

10:53:40 21 Do you recall testifying in a case in the federal
10:53:46 22 district -- the Western District of Wisconsin called
10:53:49 23 Wisconsin Alumni Research Foundation versus Apple Inc.?

10:53:56 24 A. Yes, I do.

10:53:57 25 Q. And if you could take a look, sir, at Page 219. If you

10:54:12 1 look at Line 8.

10:54:14 2 Were you asked this question: And you spent all
10:54:18 3 that time because -- are you with me, sir?

10:54:22 4 A. Yes, sir, I am.

10:54:23 5 Q. And you spent all that time because if there is a
10:54:25 6 dispute or disagreement between what someone might have
10:54:29 7 said in a descriptive document and the code, the code is
10:54:36 8 going to trump, correct?

10:54:38 9 And you said: That's correct.

10:54:40 10 Did I read that correctly?

10:54:41 11 A. You did.

10:54:42 12 Q. So is it fair to say, sir -- to go on from there, that
10:54:47 13 the code -- you used the word trump. So that means
10:54:51 14 overrules or controls?

10:54:52 15 A. I didn't use that word, no.

10:54:54 16 Q. Right.

10:54:55 17 A. It was in the question.

10:54:57 18 Q. I'm sorry.

10:54:57 19 The word trump means to you -- when something
10:55:04 20 trumps something else, it means it overrules it or controls
10:55:07 21 it; isn't that correct?

10:55:08 22 A. That was my understanding, yeah.

10:55:09 23 Q. And that's why you used that word because you wanted to
10:55:14 24 convey that meaning, true?

10:55:15 25 A. No, I did not use that word. That was in the question.

10:55:17 1 Q. You agreed that it trumps, right?

10:55:21 2 A. I did here today, yeah, sure.

10:55:25 3 Q. And so the code would trump a descriptive document,
10:55:30 4 true?

10:55:31 5 A. If there was a disparity, it would, yes.

10:55:34 6 Q. The code would trump a comment in the code, would it
10:55:38 7 not?

10:55:39 8 A. If there was a disparity, yes.

10:55:41 9 Q. And let's be clear, that when we're talking about what
10:55:45 10 a comment in a code is, I think in some of the code you've
10:55:50 11 shown the jury, there are things called comments written,
10:55:53 12 true?

10:55:53 13 A. That's correct.

10:55:54 14 Q. Comments are not actual directions to the computer, but
10:56:01 15 are, in fact, directions to the programmer or the human
10:56:06 16 being reading the code, true?

10:56:08 17 A. I wouldn't quite characterize it that way.

10:56:11 18 Q. Comments inform or can inform -- or strike that.

10:56:18 19 Comments can be written in computer code, and they
10:56:22 20 don't actually execute any instruction, fair?

10:56:24 21 A. That's fair.

10:56:25 22 Q. What is the purpose of comments?

10:56:28 23 A. Comment is to help one programmer document for another
10:56:32 24 programmer, or sometimes yourself, what a particular piece
10:56:38 25 of code is doing.

10:56:39 1 Q. And if a comment is wrong, the code is going to trump,
10:56:46 2 right?

10:56:46 3 A. The code is going to trump a comment, yes.

10:56:50 4 Q. So if a comment says that this next section is going to
10:56:56 5 do A, B, and C, but the code actually describes and does D,
10:57:05 6 E, and F -- are you with me?

10:57:09 7 A. Yes, in this hypothetical, I think I'm with you.

10:57:12 8 Q. The code is going to do D, E, and F, not A, B, and C,
10:57:17 9 right?

10:57:17 10 A. In this scenario, yes.

10:57:18 11 Q. The code trumps, separate from comments -- I'm moving
10:57:32 12 to a different topic -- the code trumps written manuals
10:57:37 13 about the software, true?

10:57:37 14 A. If there is a disparity, true.

10:57:41 15 Q. And you've seen examples in your long career, have you
10:57:46 16 not, sir, where the manuals do not match up or do not align
10:57:50 17 exactly with the code?

10:57:51 18 A. I have seen some examples in my long career, yes.

10:57:57 19 Q. In those examples, it's the code that controls, not the
10:58:05 20 manuals, true?

10:58:05 21 A. In those examples, true.

10:58:07 22 Q. All right. Let's see if we can agree on a few other
10:58:17 23 things, sir, about source code.

10:58:19 24 I think you said this on your direct examination,
10:58:24 25 but Wells Fargo doesn't actually get in the operation of

10:58:30 1 its application; it does not actually receive the Mitek
10:58:35 2 source code?

10:58:39 3 A. That's my understanding, they do not.

10:58:41 4 Q. That's something that, generally speaking, technology
10:58:45 5 companies keep secret, right?

10:58:49 6 A. I wouldn't -- I wouldn't characterize it that way.

10:58:55 7 Q. Well, let's see if you can characterize it this way.

10:58:58 8 Frequently, technology companies keep their source
10:59:03 9 code secret?

10:59:05 10 A. I wouldn't even characterize it that way.

10:59:11 11 Q. You don't think source -- okay. So you think -- is
10:59:14 12 it -- is it your experience that every technology company
10:59:18 13 publishes its source code on the Internet?

10:59:19 14 A. No, sir.

10:59:20 15 Q. Many times there are security and other restrictions in
10:59:30 16 place on who gets to see source code, right?

10:59:33 17 A. That, I would agree with, yes.

10:59:34 18 Q. That was true in this very lawsuit, wasn't it?

10:59:38 19 A. I don't know the specific security, but I agree they
10:59:44 20 did not receive the source code.

10:59:46 21 Q. Well, didn't you have to sign an order or a promise to
10:59:51 22 keep the Mitek source code confidential outside the context
10:59:54 23 of this lawsuit?

10:59:54 24 A. Yes, sir.

10:59:57 25 Q. Because companies like Mitek want to keep their source

11:00:05 1 code controlled and restricted to who gets to have access

11:00:07 2 to it, fair?

11:00:08 3 A. I assume that's the reason. But that sounds fair.

11:00:10 4 There are other reasons, usually.

11:00:12 5 Q. There could be other reasons, but one reason is, is

11:00:15 6 that software companies may want to restrict access to

11:00:18 7 their source code just to prevent other people from finding

11:00:21 8 out about it?

11:00:21 9 A. Sure.

11:00:31 10 Q. Some more things we can agree with. As I understand

11:00:34 11 it, isn't it true that each step in the source code will

11:00:38 12 generally be executed in the order in which it appears?

11:00:43 13 A. That's generally true. There are exceptions.

11:00:47 14 Q. There are exceptions. But can we agree that, generally

11:00:51 15 speaking -- and I understand there can be exceptions --

11:00:55 16 but, generally speaking, Line 1 will come first, Line 2

11:01:00 17 will come second, Line 3, and the code will be executed,

11:01:03 18 generally speaking, in that order?

11:01:09 19 A. There's so many exceptions that -- yes, generally, it

11:01:14 20 will be executed, what we call sequentially. But there's

11:01:19 21 many, many instances where you have a condition that

11:01:21 22 prevents it from being executed sequentially. It goes

11:01:24 23 somewhere else.

11:01:24 24 Q. There's complicated operations that are performed in

11:01:29 25 source code sometimes, and so what you're suggesting is

11:01:33 1 maybe it's sequential for a part, and then it may jump up
11:01:36 2 to something earlier or jump up to something later,
11:01:38 3 depending on what's happening?

11:01:40 4 A. That's -- that's one example.

11:01:43 5 Q. Okay. And -- but here, when you went through the
11:01:47 6 source code on your direct examination, a lot of it was
11:01:51 7 sequential?

11:01:53 8 A. Yes, it was.

11:01:54 9 Q. It was in exactly, what I said at the beginning, which
11:01:59 10 is it goes in the order in which it's written, right, for
11:02:02 11 the examples you gave?

11:02:04 12 A. Yes. And that was my hesitation. For the example I
11:02:07 13 went over, it does.

11:02:09 14 Q. And you know that's the example that is what the trial
11:02:14 15 is about, right?

11:02:15 16 A. Yes, sir.

11:02:15 17 Q. Okay. So I want to direct your attention to Volume 2
11:02:23 18 at Tab 18. And this DTX-11, which I believe is
11:02:40 19 pre-admitted.

11:02:48 20 Have you seen this before, sir?

11:02:49 21 A. Yes. This is the source code I reviewed for the jury.

11:02:53 22 Q. Okay. Thank -- okay.

11:03:02 23 MR. MELSHEIMER: May I have one moment, Your
11:03:04 24 Honor?

11:03:04 25 THE COURT: You may.

11:03:08 1 MR. MELSHEIMER: For the record, Your Honor, I
11:03:09 2 believe I may have said 11, and I meant to say DTX-611.

11:03:17 3 THE COURT: So noted.

11:03:21 4 Q. (By Mr. Melsheimer) Now, we're going to publish the
11:03:23 5 first page of this, sir. It's not the easiest thing to
11:03:25 6 read, but can you read it okay? You have both a screen and
11:03:30 7 a hard copy, right?

11:03:30 8 A. Yeah, I'm good.

11:03:32 9 Q. All right. So I wanted --

11:03:34 10 THE COURT: Counsel -- counsel, approach the
11:03:35 11 bench, please.

11:03:43 12 (Bench conference.)

11:03:43 13 THE COURT: Does the record in the courtroom need
11:03:46 14 to be sealed, or is there going to be source code in the
11:03:49 15 transcript that's going to become publicly available?

11:03:51 16 MR. MELSHEIMER: You know --

11:03:52 17 THE COURT: I'm asking you all.

11:03:53 18 MR. MELSHEIMER: That's a good question.

11:03:54 19 MR. SHEASBY: Your Honor, they did not request
11:03:56 20 sealing, so we assumed Mitek didn't care.

11:03:58 21 MR. BITTNER: Mitek has not --

11:04:00 22 MR. MELSHEIMER: They've not asked for it, Your
11:04:02 23 Honor.

11:04:02 24 THE COURT: I just would rather ask now than find
11:04:05 25 out --

11:04:05 1 MR. MELSHEIMER: I agree --

11:04:05 2 THE COURT: -- the horse is out of the barn later.

11:04:08 3 MR. SHEASBY: Your Honor, my concern is

11:04:09 4 Mr. Melsheimer just went through a long commentary about

11:04:12 5 how secret this code is, and he just published it in front

11:04:15 6 of the entire jury. And so now to give him the benefit of

11:04:20 7 being able to take that back, strikes me as a concern.

11:04:21 8 Mitek's general counsel is in the room. He, obviously,

11:04:24 9 hasn't raised any objection. It's their obligation to do

11:04:26 10 so.

11:04:26 11 THE COURT: My question was: Do either Plaintiff

11:04:28 12 or Defendant wish to seal the record and the courtroom

11:04:31 13 before we go into this source code? I hear no request.

11:04:34 14 Let's move on.

11:04:35 15 MR. MELSHEIMER: Thank you, Your Honor.

11:04:36 16 (Bench conference concluded.)

11:04:41 17 THE COURT: Let's proceed.

11:04:45 18 Q. (By Mr. Melsheimer) So I just want to focus on -- to

11:04:48 19 publish to the jury the first three lines of the code, sir.

11:05:00 20 MR. MELSHEIMER: If you can pull it up,

11:05:02 21 starting -- go from 2278 to 2280, Mr. Barnes. Is there a

11:05:08 22 way to obscure the rest of it?

11:05:11 23 THE TECHNICIAN: Sure.

11:05:18 24 Q. (By Mr. Melsheimer) Dr. Conte, you've -- you've got

11:05:20 25 the whole exhibit there, but we're just going to be

11:05:22 1 publishing these -- these first three lines at this point.
11:05:26 2 But you're -- you're free to refer to anything else. But
11:05:28 3 just a few questions so we can make we're all on the same
11:05:36 4 page.

11:05:36 5 2278 is the first line of code on that page,
11:05:38 6 correct?

11:05:40 7 A. Yeah, that's accurate.

11:05:42 8 Q. And in these first three lines, the word "capture," by
11:05:49 9 my count, appears five times. In the first line 2278, it
11:05:54 10 says captureOutput. Then there's -- and we're going to go
11:05:58 11 over these, sir. I'm just counting up the words "capture."
11:06:03 12 Then there's AVCaptureOutput, then there's captureOutput,
11:06:03 13 and then the third line, 2280, there's captureConnection
11:06:14 14 and then captureSessionConnection.

11:06:18 15 So you agree that "capture" appears five times in
11:06:21 16 those lines of code, right?

11:06:23 17 A. That word does, yes.

11:06:25 18 Q. In the first part of the name of the function on 2278
11:06:29 19 is called captureOutput, right?

11:06:34 20 A. It's actually (void)captureOutput.

11:06:39 21 Q. Well, we're going to talk about what void means --
11:06:40 22 well, let's talk about what void means right now.

11:06:41 23 A. Okay. Sure.

11:06:43 24 Q. Okay. So void is actually a terminology that is part
11:06:48 25 of the Apple operating system, is it not, sir?

11:06:52 1 A. That's incorrect.

11:06:53 2 Q. Well, why don't you tell the jury what void means?

11:06:57 3 A. Well, it's complicated, sir. But void, in general,
11:07:01 4 means that this particular chapter isn't going to return --
11:07:07 5 oh, wow. All right. Pardon me. It's not going to return
11:07:10 6 either an integer or a pointer to a region in memory as a
11:07:20 7 direct value.

11:07:24 8 Q. Okay. I'm going to try to help you unpack that for me,
11:07:33 9 sir. All right?

11:07:34 10 So -

11:07:34 11 THE COURT: I think we just moved from the
11:07:38 12 freshman level to the senior level. Let's continue.

11:07:50 13 Q. (By Mr. Melsheimer) So --

11:07:50 14 MR. MELSHEIMER: May I use this easel, Your Honor?

11:07:52 15 THE COURT: How do you intend to use it, counsel?

11:07:55 16 MR. MELSHEIMER: I was going to write some things
11:07:56 17 on it.

11:07:57 18 THE COURT: If you'll pull it up even with the
11:07:59 19 front of the podium, that will be fine.

11:08:07 20 MR. MELSHEIMER: May I -- may I stand here, Your
11:08:09 21 Honor?

11:08:09 22 THE COURT: Yes, you may.

11:08:10 23 Q. (By Mr. Melsheimer) So void is a term that appears
11:08:17 24 before these other words in the -- in the source code,
11:08:21 25 correct?

11:08:21 1 A. Other words in the function name.

11:08:25 2 Q. In the -- right. In this line?

11:08:28 3 A. In this line.

11:08:28 4 Q. I just want to orient ourselves to what we're talking
11:08:32 5 about here.

11:08:32 6 A. Well, let's be clear. This is the function
11:08:36 7 declaration, we call it.

11:08:37 8 Q. Okay. The function declaration is captureOutput?

11:08:42 9 A. This is the beginning of the name -- this is the name
11:08:45 10 of that function. Like I said, this is the name of a
11:08:47 11 chapter. It's a name of a tab in a binder.

11:08:49 12 Q. And what I heard you say is when this -- when this word
11:08:54 13 void appears, is it -- do I have this right, is that it's
11:08:57 14 telling what follows next that I don't want to get anything
11:09:02 15 back?

11:09:02 16 A. No, that's not accurate.

11:09:04 17 Q. Okay. Let me compare it to something else. Have you
11:09:09 18 seen this word "int"? Is that a word that's used in your
11:09:20 19 world?

11:09:20 20 A. Yeah, that means integer, so a whole number --

11:09:20 21 Q. So --

11:09:24 22 A. -- or a negative number.

11:09:25 23 Q. -- if -- if integer precedes a function, does that mean
11:09:29 24 that the program is expecting something back, like a number
11:09:32 25 or sum or something of that nature?

11:09:34 1 A. So let me be precise. It is saying that the direct
11:09:42 2 return value will be an integer value, but there could be
11:09:47 3 side effects that aren't in the direct return value. So we
11:09:51 4 use void when there aren't specific direct return values
11:09:57 5 but instead there are other side effects.

11:09:59 6 Q. But it doesn't -- maybe I can get at it this way. Void
11:10:06 7 doesn't mean you ignore what comes next, right?

11:10:08 8 A. No, it doesn't.

11:10:09 9 Q. Okay. So just -- because we see this word void in
11:10:14 10 Exhibit 611, and I just want to make it clear, it doesn't
11:10:17 11 mean that whatever follows is supposed to be ignored or
11:10:22 12 it's not important, right?

11:10:23 13 A. It specific -- well, it's -- it's a little more precise
11:10:29 14 than that.

11:10:29 15 Q. Well, let me ask it this way.

11:10:32 16 MR. MELSHEIMER: Your Honor, can I -- can I move
11:10:33 17 this back?

11:10:34 18 THE COURT: You may move it back.

11:10:36 19 Q. (By Mr. Melsheimer) We can agree that void doesn't
11:10:42 20 direct the computer to ignore what happens next, right?

11:10:48 21 A. Doesn't direct the computer to avoid what happens next.

11:10:54 22 Q. To ignore?

11:10:55 23 A. Oh, I'm sorry. So all -- none of this is code that's
11:11:01 24 executed by the computer right now.

11:11:02 25 Q. The word void?

11:11:03 1 A. No, the three lines we have here.

11:11:06 2 Q. Okay. And void means that -- let's make sure we're --
11:11:10 3 let's make sure we're on the same page. Void means --
11:11:15 4 plain English, means what?

11:11:16 5 A. It means that this -- when used -- this message,
11:11:21 6 actually, in Swift, which is Apple's language that's here,
11:11:26 7 it's sort of a hybrid between C++, Objective-C, and
11:11:31 8 Smalltalk. This message that extends the class is going
11:11:39 9 to, when sent to an object, not return directly anything.
11:11:47 10 However, there can be side effects -- and we saw some of
11:11:50 11 those side effects today -- that do happen.

11:11:52 12 Q. Is it fair that to say that these three lines of code
11:11:59 13 represent a message between Apple's iPhone software and the
11:12:07 14 Mitek MiSnap code?

11:12:09 15 A. No, that's not fair.

11:12:10 16 Q. Do these code lines allow the Apple operating system
11:12:13 17 and the MiSnap camera application to talk to each other?

11:12:18 18 A. That's incomplete. Imprecise.

11:12:23 19 Q. What's missing?

11:12:24 20 A. Well, the rest -- the other 225 lines.

11:12:28 21 Q. Right. But I'm talking about these three lines. I
11:12:31 22 just want to understand that is there a protocol -- maybe
11:12:35 23 say it more generally.

11:12:36 24 Is there a protocol that programmers have to
11:12:41 25 follow when writing software for application in the Apple

11:12:48 1 operating system?

11:12:48 2 A. Yeah, we don't call it a protocol. We call it an API
11:12:51 3 for application programmer interface.

11:12:53 4 Q. Because -- maybe we can back off and make it more --
11:12:58 5 more simple.

11:12:59 6 The iPhone runs on something called iOS?

11:13:07 7 A. That's right.

11:13:07 8 Q. And that is the Apple operating system. The Samsung
11:13:14 9 phone, for example, runs on something called the Android
11:13:17 10 operating system, right?

11:13:17 11 A. A derivative of Android, yes.

11:13:24 12 Q. And there are all kinds of apps -- I mean, we've
11:13:26 13 experienced this, right, there's all kinds of apps that you
11:13:29 14 can put on your phone, right?

11:13:31 15 A. Yes.

11:13:31 16 Q. Movie apps, restaurant apps, plane reservations,
11:13:37 17 whatever, and mobile banking apps, right?

11:13:40 18 A. Yes.

11:13:40 19 Q. And those apps are sometimes written by people at
11:13:44 20 Apple, right?

11:13:45 21 A. Yes.

11:13:46 22 Q. But sometimes they're written by other developers who
11:13:50 23 want to write software programs that will work on the Apple
11:13:56 24 iPhone, right?

11:13:58 25 A. Yes.

11:13:58 1 Q. And so, for example, the camera app is actually
11:14:05 2 something that comes with the iPhone when you buy it,
11:14:10 3 right?

11:14:10 4 A. Yes, that's my understanding, yeah.

11:14:13 5 Q. It's preloaded.

11:14:14 6 A. I don't have an iPhone. My wife does, but, yes.

11:14:17 7 Q. And do you have an Android phone?

11:14:19 8 A. I am a devout Android phone user, yes.

11:14:23 9 Q. So same -- same principle, though, that -- that there
11:14:26 10 is -- there is some software applications that are
11:14:32 11 preloaded on to the Samsung phone, just like the iPhone?

11:14:35 12 A. Yes.

11:14:35 13 Q. And -- and so if somebody wants -- and, again, I want
11:14:40 14 to be very high level with you so I can understand it -- if
11:14:43 15 someone wants to write a program, an application program,
11:14:47 16 let's say I want to write an application that will keep
11:14:57 17 track of all of my favorite restaurants?

11:15:01 18 A. Okay.

11:15:02 19 Q. Okay. And I wanted to write that in a way that would
11:15:05 20 work on the Apple iPhone, okay, I would have to follow
11:15:08 21 certain rules or APIs set by Apple to make sure that my
11:15:15 22 program would actually interface properly and work on the
11:15:20 23 iPhone. Do I have that generally correct?

11:15:22 24 A. Generally, you'd go to a developer's manual that would
11:15:25 25 develop -- define the SDK that would have the API in it,

11:15:29 1 and you would use that description, yes.

11:15:32 2 Q. And if you don't have that information or knowledge,
11:15:38 3 you can't really write an application that you can be sure
11:15:43 4 will work the way you want it to work on the Apple iPhone,
11:15:48 5 right?

11:15:48 6 A. That's correct. The documentation is important.

11:15:51 7 Q. And I guess what I'm trying to get at here, whether
11:15:55 8 it's my restaurant application or whether it's a game,
11:16:05 9 Candy Crush or some game on the phone, it has to work with
11:16:10 10 the pre-existing software in the operating system, true?

11:16:13 11 A. Correct.

11:16:15 12 Q. That's true with Wells Fargo's mobile banking
11:16:23 13 application, isn't it, as well?

11:16:26 14 A. Yes.

11:16:26 15 Q. It's one of those applications that is written for use
11:16:31 16 on a smartphone, and it can be downloaded to an iPhone or
11:16:36 17 it can be downloaded to an Android phone, right?

11:16:38 18 A. That's right.

11:16:39 19 Q. The software is different in both those operating
11:16:45 20 systems, right?

11:16:46 21 A. That's right.

11:16:47 22 Q. It's a little bit like -- again, tell me if I'm wrong,
11:16:50 23 but it's a little bit like a different language?

11:16:53 24 A. I wouldn't describe it as a language.

11:16:55 25 Q. Well, it's a different -- how would you describe it, a

11:16:58 1 different context, a different setting?

11:17:00 2 A. I would describe it as living in a different country.

11:17:03 3 Q. There you go. Where they sometimes speak different
11:17:06 4 languages?

11:17:06 5 A. And they have different protocols for doing things
11:17:10 6 and -- yeah.

11:17:10 7 Q. Okay. So the country of the Apple operating system is
11:17:16 8 different from the country of the Android operating system,
11:17:18 9 right?

11:17:18 10 A. The two operating systems have different APIs.

11:17:23 11 Q. And they're different -- to take your example, your
11:17:27 12 country example, you know, if you're in a country that
11:17:30 13 drives on the left-hand side of the road, you've got to
11:17:32 14 know that rule if you want to drive, right?

11:17:34 15 A. Correct.

11:17:35 16 Q. And if you want to write software for the Apple phone,
11:17:38 17 you've got to know the rules that Apple has set up, right?

11:17:41 18 A. You have to look at the API manual, yes.

11:17:44 19 Q. And the API manual is -- would you also refer to that
11:17:50 20 as developer documentation?

11:17:51 21 A. Sure.

11:17:51 22 Q. And I think that you -- I think that you relied or
11:18:01 23 looked at some of the Apple development -- development
11:18:06 24 manuals in connection with your study in this case, right?

11:18:08 25 A. I did.

11:18:08 1 Q. And isn't it true that in that development manual, that
11:18:19 2 Apple tells developers, again, generally speaking, how to
11:18:24 3 write software code if you want to take a picture and do
11:18:30 4 something with it?

11:18:32 5 A. I wouldn't characterize it that way.

11:18:34 6 Q. Well, does it tell developers how to use the camera in
11:18:41 7 connection with other software programs?

11:18:44 8 A. I would say the image sensor and optics, but, sure.

11:18:48 9 Q. Because the image sensor and optics, and that's this
11:18:55 10 little thing right -- right here on the phone; right?

11:18:57 11 A. Yeah, and what's below it.

11:18:59 12 Q. What's below it. And it's different places on
11:19:02 13 different phones, but, basically, that's what you're
11:19:03 14 talking about, the image sensor?

11:19:07 15 A. And the optics, yeah.

11:19:08 16 Q. And that is something that shows up on everyone's phone
11:19:13 17 in -- in its own way, whether it's an Apple or an Android,
11:19:16 18 they have their own way of having a camera -- the image
11:19:21 19 sensor interact with other parts of the phone, correct?

11:19:25 20 A. Generally, yes. The two operating systems have
11:19:28 21 different ways of accessing the image sensor.

11:19:31 22 Q. But if you wanted to write a program that would do
11:19:38 23 something with the image sensor on an Apple phone, you'd
11:19:41 24 have to know the rules of how to do that, right?

11:19:43 25 A. Right.

11:19:47 1 Q. Same with an Android phone, right?

11:19:48 2 A. Yes.

11:19:49 3 Q. Those development manuals tell the developers how to go
11:19:54 4 about doing that, generally speaking, right?

11:19:58 5 A. Yes.

11:20:00 6 Q. They tell the developers -- to take your analogy of the
11:20:06 7 different countries, hey, over here, we drive on the
11:20:09 8 left-hand side of the road, so if you want to do something
11:20:11 9 with traffic, you need to keep that in mind, right?

11:20:18 10 A. That's correct, in this scenario.

11:20:20 11 Q. Now, take a look at, if you would, Volume 2, and we're
11:20:39 12 not publishing this to the jury, but just take a look at
11:20:44 13 Volume 2, Tab 20, sir.

11:20:52 14 A. I'm there.

11:20:52 15 Q. Now, this is something that you cite in your report, is
11:20:56 16 it not?

11:20:58 17 A. Yes, I believe this is actually a public document, sir.

11:21:02 18 Q. I'm sorry, I did -- I -- but you cite it in your
11:21:06 19 report, correct?

11:21:07 20 A. Yes, I did.

11:21:07 21 Q. And it's part of the developer's guide, is it not?

11:21:13 22 A. It is.

11:21:14 23 Q. And I just want to -- while we've got Exhibit 611 still
11:21:18 24 up, the first function there is captureOutput, right?

11:21:23 25 A. The first function?

11:21:29 1 Q. Right after void, it's captureOutput?

11:21:33 2 A. That is the -- the identifier, yes.

11:21:35 3 Q. Yeah, what do you call captureOutput there? What do
11:21:39 4 you -- what's the word to use so you and I aren't confused?

11:21:39 5 A. Method.

11:21:40 6 Q. The first method is captureOutput?

11:21:42 7 A. But that isn't quite accurate either.

11:21:45 8 Q. Well, you just said it was method?

11:21:47 9 A. Well, the full method name in Swift is quite a
11:21:47 10 mouthful. It's captureOutput, dataOutput, sampleBuffer,
11:21:53 11 fromConnection.

11:21:53 12 Q. You're reading that?

11:21:54 13 A. Well, I can read it from either place, yeah.

11:21:56 14 Q. No, but I mean you're reading it from the -- it's in
11:22:00 15 the Apple's developer's manual that we're about to talk
11:22:02 16 about, right?

11:22:02 17 A. Yes.

11:22:03 18 Q. And that is sort of -- you're saying captureOutput is
11:22:08 19 sort of shorthand for that mouthful?

11:22:10 20 A. Yes.

11:22:11 21 Q. Okay. And this is something from Apple that tells a
11:22:22 22 programmer how to interact between the Apple iPhone and, in
11:22:33 23 this example, a video frame?

11:22:35 24 A. Yes.

11:22:36 25 Q. It says, notifies the delegate that a new video frame

11:22:46 1 was written, that captureOutput, that method. Do I have
11:22:49 2 the word right?

11:22:51 3 A. Yes.

11:22:51 4 Q. That that method notifies the delegate that a new video
11:22:56 5 frame was written. Did I read that right?

11:23:02 6 A. That's -- that's incorrect.

11:23:03 7 Q. Well --

11:23:04 8 A. This is the delegate.

11:23:06 9 Q. I'm sorry, my question was, did I read, notifies the
11:23:11 10 delegate that a new video frame was written, is that -- is
11:23:14 11 that what it says there?

11:23:15 12 A. That's -- those are the literal words.

11:23:21 13 Q. Okay. Now, I want to break apart a couple of those
11:23:25 14 terms. What's the delegate?

11:23:27 15 A. So the delegate would be the code that's contained
11:23:32 16 within captureOutput, dataOutput, sampleBuffer, and
11:23:40 17 fromConnection.

11:23:40 18 Q. Delegate, does the delegate have anything to do with
11:23:45 19 the Mitek code?

11:23:46 20 A. Mitek writes their own delegate for captureOutput,
11:23:54 21 dataOutput, sampleBuffer and fromConnection.

11:23:54 22 Q. So it's a mouthful I want to make sure you and I are
11:23:57 23 communicating.

11:23:58 24 A. Let's just call it captureOutput for short, and that
11:24:01 25 will work.

11:24:02 1 Q. That'd be -- okay. Thank you.

11:24:04 2 Is it true, sir, that delegation, as defined by
11:24:08 3 Apple, allows one piece of software to reference another
11:24:11 4 piece of software?

11:24:12 5 A. I think reference is -- is a little incorrect.

11:24:22 6 Q. What's the word you would use?

11:24:23 7 A. I'd just say call.

11:24:25 8 Q. Call. So delegation is a way of saying if you want to
11:24:30 9 call another piece of software, this is how you do it?

11:24:36 10 A. So this is where it gets a little fuzzy because Apple
11:24:45 11 is talking in terms of the language called Smalltalk where
11:24:49 12 the delegate here is actually captureOutput, and this is
11:24:53 13 saying this message tells captureOutput that a new video
11:24:59 14 frame was written.

11:24:59 15 Q. And the -- the delegate here is the Mitek source code,
11:25:11 16 correct?

11:25:11 17 A. Yes, the delegate is what's in this container; whatever
11:25:18 18 you pour in this container is the delegate.

11:25:21 19 Q. It could be -- and I -- let me -- let me say it this
11:25:24 20 way. It could be any sort of interaction. It doesn't --
11:25:29 21 it's not -- this isn't written -- the delegation concept
11:25:32 22 isn't something that's special to the camera, right?

11:25:36 23 A. No. You can -- so this is -- this is not special to
11:25:41 24 the camera. You can replace certain standard parts of the
11:25:44 25 operating system by using delegation.

11:25:46 1 Q. And the way I understand this works, sir, and you tell
11:25:52 2 me if it's wrong, the Apple operating system engages the
11:25:58 3 video -- the image sensor, and then obtains a video frame
11:26:04 4 from that sensor?

11:26:09 5 A. Yes.

11:26:09 6 Q. And then that video frame is in the format of -- I
11:26:15 7 think of what you've called a -- not just you personally,
11:26:19 8 but it's what's called a bitmap?

11:26:21 9 A. A bitmap or a YUV, yes.

11:26:24 10 Q. Is a YUV the same thing as a bitmap?

11:26:27 11 A. It's a special type of bitmap, but, yes.

11:26:30 12 Q. And then this bitmap or YUV is put into a buffer by
11:26:39 13 Apple that the MiSnap software can access, right?

11:26:46 14 A. Generally, yes.

11:27:27 15 (Pause in proceedings.)

11:27:27 16 MR. MELSHEIMER: Thank you, Your Honor. Thank you
11:27:28 17 for the pause. I just needed to move on to something else.

11:27:32 18 THE COURT: It's your time, counsel.

11:27:33 19 MR. MELSHEIMER: Thank you.

11:27:33 20 Q. (By Mr. Melsheimer) Now, I want to understand what you
11:27:37 21 say the capture is in your infringement analysis. Are you
11:27:45 22 with me?

11:27:46 23 A. Yes.

11:27:47 24 Q. Okay. Now, you say that capture is not getting that
11:27:59 25 data from the image sensor and creating a bitmap?

11:28:08 1 A. That's correct.

11:28:09 2 Q. So you and I are on the same page.

11:28:17 3 When you open up your camera -- and let's just
11:28:21 4 talk about just a -- let's not talk about the app just yet,
11:28:24 5 but let's just talk about taking a picture. Are you with
11:28:27 6 me?

11:28:27 7 A. Yes.

11:28:35 8 Q. Okay. Actually, let's talk about the app.

11:28:38 9 A. Okay.

11:28:38 10 Q. When I open up the app, whether it's the Wells Fargo
11:28:43 11 app or any -- any kind of app, when I -- but let's -- let's
11:28:47 12 focus on the Wells Fargo app -- and I want to deposit a
11:28:50 13 check, I will hit a button that goes to that function, and
11:28:56 14 then it -- then it will engage the camera to take a picture
11:29:00 15 of the front and back of the check, right?

11:29:05 16 A. Well, in the complicated process that we outlined, yes.

11:29:09 17 Q. And I'm not -- I'm just trying to -- at a high level
11:29:12 18 for someone that uses it, I'm just trying to get to the
11:29:15 19 point where you and I can talk about what actually happens.
11:29:18 20 All right?

11:29:20 21 But the app is open. You want to deposit -- you
11:29:23 22 can do many different things with the app, right?

11:29:25 23 A. Yes.

11:29:26 24 Q. Okay.

11:29:27 25 A. Yes.

11:29:27 1 Q. So you have to find a button that opens up the function
11:29:32 2 that allows you to deposit a check, right?

11:29:35 3 A. Yes.

11:29:36 4 Q. And when you do that, it will say, generally speaking,
11:29:41 5 take a picture of the front of the check and the back of
11:29:44 6 the check, right?

11:29:45 7 A. I don't recall the exact words, but, okay, for the sake
11:29:49 8 of argument.

11:29:49 9 Q. And you hold it over the check, right?

11:29:54 10 A. Uh-huh.

11:29:54 11 Q. And -- sorry, is that a yes?

11:29:57 12 A. Yes, sorry.

11:29:57 13 Q. And whether it's manual capture or auto capture --
11:30:03 14 we'll talk about that. If it's manual capture, you have to
11:30:07 15 push the button, right?

11:30:08 16 A. Yes.

11:30:09 17 Q. If it's auto capture, it will take the picture without
11:30:13 18 pushing a button, right?

11:30:14 19 A. Let's be precise. It will capture the picture.

11:30:17 20 Q. Okay. Okay. We're going to talk about that. Oh, so
11:30:22 21 it is capturing the picture?

11:30:23 22 A. It -- after it passes the monitoring criterion.

11:30:26 23 Q. Well, let's -- let's just focus on what -- what
11:30:28 24 we're -- what we're talking about here. So captures -- it
11:30:32 25 will say front of the check, and then it will say turn it

11:30:35 1 over, take the back of the check, and you'll have -- you'll
11:30:38 2 have an image in the app of the front of the check and the
11:30:41 3 back of the check, right?

11:30:42 4 A. Are you saying presented to the user or --

11:30:48 5 Q. Yeah, you as a user looking at it, you're going to see
11:30:51 6 a picture of the front of the check and the back of the
11:30:53 7 check, right?

11:30:53 8 A. So it doesn't -- I'm sorry, after you -- can you be
11:31:00 9 specific of when -- when this happens?

11:31:02 10 Q. We are hovering our -- our -- our camera over the
11:31:09 11 check, whether it's manual or auto capture, the picture of
11:31:13 12 the -- of the check, the front and back of the check shows
11:31:16 13 up on your phone?

11:31:16 14 A. I wouldn't describe that as a picture.

11:31:19 15 Q. Okay.

11:31:19 16 A. That's a live view, I'd call it.

11:31:21 17 Q. It's an image of the check, is it not, sir?

11:31:23 18 A. It's straight off the image sensor.

11:31:28 19 Q. Okay. So you say when -- just to describe this for the
11:31:35 20 jury, and I want to make sure we're on the same page.

11:31:39 21 You say that what's shown in the app as the front
11:31:42 22 and back of the check is not a picture of the check?

11:31:48 23 A. That isn't what I said, sir.

11:31:50 24 Q. Okay. What is shown in the app as the front and back
11:31:57 25 of the check? Is it a -- just back it up. Is it a cartoon

11:32:01 1 drawing?

11:32:01 2 A. Come on, no.

11:32:03 3 Q. It's a -- it's the image of the check, right?

11:32:06 4 A. At what point are we speaking about?

11:32:09 5 Q. Right when you engage the app and put your phone over

11:32:14 6 the -- over the check, what shows up in the app?

11:32:18 7 A. It's that 30 frames per second preview image that you

11:32:22 8 get, and it's stored in -- it's called a CMSampleBufferRef

11:32:28 9 in Apple, and it's a sample buffer.

11:32:29 10 Q. And it is an image?

11:32:31 11 A. It is a transient image.

11:32:33 12 Q. Okay. Now, you say it's transient. I want to talk --

11:32:36 13 we'll talk about that in a minute, but it's on your phone.

11:32:39 14 You can see it, right?

11:32:43 15 A. For a brief second, yes.

11:32:44 16 Q. You can see the front and back of it, right?

11:32:47 17 A. I'm sorry, I -- I don't -- you're either looking at a

11:32:53 18 live view of the front or the back. You don't see them

11:32:55 19 both at the same time.

11:32:56 20 Q. I'm talking about after it's been captured, sir.

11:32:59 21 A. That's a different scenario. After it's been captured?

11:33:05 22 After it's been captured, then what you see is the success

11:33:08 23 pop up. And actually the app will show you a reduced

11:33:13 24 thumbnail of it, but that image has been transcoded to a

11:33:17 25 JPEG which gets uploaded to the bank.

11:33:19 1 Q. So you're saying that when I use -- when anyone uses
11:33:29 2 the app and the picture shows up, whether it's the front or
11:33:33 3 the back -- let's not get caught up in that -- that picture
11:33:37 4 is an image, and then it's later turned -- it's later
11:33:43 5 compressed into a JPEG?

11:33:44 6 A. I wouldn't characterize it that way.

11:33:46 7 Q. It later becomes a JPEG?

11:33:49 8 A. I wouldn't quite characterize it that way either.

11:33:53 9 Q. Well, at some point, you believe that the capture
11:33:57 10 process has occurred when the JPEG image is created and
11:34:01 11 compressed, right?

11:34:02 12 A. Well, JPEG is a compressed image, so when it's created.

11:34:12 13 Q. So buffer -- the word "buffer" is another -- is
11:34:15 14 describing something that's memory, right?

11:34:19 15 A. Yeah, that's generally how this term is used here.
11:34:23 16 It's a -- it's a region of memory.

11:34:24 17 Q. Now, you say it's volatile memory?

11:34:28 18 A. Yes.

11:34:28 19 Q. But it's still memory, right?

11:34:31 20 A. Yeah. Volatile memory means it's not going to hang
11:34:34 21 around long.

11:34:35 22 Q. Well, it actually can hang around for quite a bit of
11:34:38 23 time even if it's in volatile memory; isn't that right,
11:34:42 24 sir?

11:34:42 25 A. What's it -- I'm sorry --

11:34:45 1 Q. Well, the image --

11:34:47 2 A. Oh --

11:34:47 3 Q. -- just because -- I'm sorry, let me --

11:34:50 4 THE COURT: Let's make sure that one is finished
11:34:51 5 before the other starts to talk. You all are bleeding over
11:34:58 6 each other, and that's not good for the jury's
11:35:00 7 understanding, it's not good for the record, it's not good
11:35:03 8 for the Court, so make sure there's some space between you.

11:35:07 9 Go ahead, counsel.

11:35:09 10 Q. (By Mr. Melsheimer) An image can exist in volatile
11:35:12 11 memory for quite awhile?

11:35:15 12 A. Sure. Eventually you have to do something with it or
11:35:21 13 it will disappear.

11:35:22 14 Q. But I just want to make sure that you and I are on the
11:35:26 15 same page. You're not saying that volatile memory means,
11:35:29 16 by definition, that the image that's in the buffer or the
11:35:31 17 volatile memory disappears in five seconds or 10 seconds or
11:35:35 18 anything like that; you're not saying that?

11:35:37 19 A. Oh -- can we be specific? You mean sampleOutput?

11:35:49 20 Q. I'm talking about just the notion of volatile generally
11:35:49 21 that you described in your report.

11:35:50 22 A. It depends.

11:35:52 23 Q. Which is to say it doesn't mean that it automatically
11:35:55 24 disappears after a set period of time, right?

11:35:58 25 A. Or it could.

11:35:59 1 Q. It could but doesn't have to is my point.

11:36:02 2 A. Sure.

11:36:02 3 Q. Now, you say -- to go back to the "capture" phrase, you
11:36:14 4 say that capture is not turning light into a digital image?

11:36:21 5 A. That's incorrect.

11:36:22 6 Q. Well, I thought you said that capture didn't happen
11:36:27 7 until the JPEG was created?

11:36:32 8 A. That's the point of commitment, so, yes, that's when it
11:36:37 9 happens.

11:36:37 10 Q. Well, I want to make sure I understand your testimony,
11:36:39 11 sir. And let's get back to Paragraph 412 of your report.
11:36:43 12 That's in Volume 1, Tab 3. It's also up on the screen.

11:36:59 13 You say, a JPEG image is created and transmitted
11:37:02 14 via communication network to Wells Fargo's servers where
11:37:05 15 the check image is stored. This is the first and only time
11:37:10 16 that the check image is captured. Did I read that
11:37:13 17 correctly?

11:37:13 18 A. You did.

11:37:15 19 Q. Okay. Now, there -- as I understand it, there are two
11:37:18 20 components to this. First, there needs to be a JPEG file,
11:37:25 21 right?

11:37:25 22 A. A JPEG format, yes.

11:37:28 23 Q. And we can agree that when the image sensor takes the
11:37:36 24 image that it is -- it is not creating a JPEG file at that
11:37:41 25 moment. It creates what you call a bitmap, right?

11:37:44 1 A. That's the raw data off the sensor. It's not creating.
11:37:49 2 It's reading.
11:37:50 3 Q. Well, the raw data off the sensor is everything that
11:37:53 4 goes into the picture, right? It's millions or tens of
11:37:57 5 millions of pixels, right?
11:37:59 6 A. I wouldn't characterize it that way.
11:38:01 7 Q. Well, you would characterize it as the data or the
11:38:05 8 information from the sensor that the sensor is seeing in
11:38:09 9 its field of view, and it's creating -- you say it's
11:38:14 10 creating a bitmap from that sensor view, right?
11:38:18 11 A. That isn't what I said.
11:38:20 12 Q. Well, what's created first, the JPEG or the bitmap?
11:38:27 13 A. The bitmap isn't created. It's read.
11:38:31 14 Q. Well, does the bitmap of a check exist before I put my
11:38:37 15 camera over it?
11:38:38 16 A. At that point, the sensor doesn't have the data for the
11:38:43 17 check on it.
11:38:44 18 Q. Because the bitmap is created when you put the camera
11:38:49 19 over the check, right?
11:38:51 20 A. I wouldn't characterize it that way.
11:38:53 21 Q. Well, Mr. -- Dr. Conte, you're not saying that there's
11:38:59 22 a -- there's a bitmap -- whether it's whatever you want to
11:39:03 23 call a YUV or any other kind of bitmap, you're not saying
11:39:09 24 there's a bitmap of a check before I put my phone over it
11:39:12 25 to view it, are you?

11:39:15 1 A. That's not what I'm saying either.

11:39:17 2 Q. Okay. You're saying that the JPEG image that is
11:39:21 3 created and transmitted is something different from -- it's
11:39:27 4 a different form than the bitmap, true?

11:39:30 5 A. It is a different form, yes.

11:39:32 6 Q. Is it fair to say that the bitmap contains a lot more
11:39:36 7 information than the JPEG?

11:39:37 8 A. I wouldn't go that far.

11:39:43 9 Q. Well, the JPEG is a form of compression, right?

11:39:46 10 A. Generally, yes.

11:39:47 11 Q. And compression is what we do with images for various
11:39:58 12 purposes, right?

11:40:01 13 A. Generally, yes.

11:40:03 14 Q. Okay. And so the JPEG -- JPEG is just one form of
11:40:10 15 compression, right?

11:40:11 16 A. I wouldn't characterize it as that.

11:40:13 17 Q. Well, it's -- it's one form of an image file?

11:40:17 18 A. I wouldn't quite characterize it that way either.

11:40:21 19 Q. What are the various forms of an image file, Dr. Conte,
11:40:25 20 besides JPEG?

11:40:25 21 A. So that isn't what -- so what are the various forms?
11:40:29 22 There's many.

11:40:29 23 Q. Is JPEG one of them?

11:40:31 24 A. JPEG is an encoding used in -- in an image file --
11:40:36 25 what's commonly used.

11:40:37 1 Q. What are the others?

11:40:39 2 A. As I said, there are many.

11:40:40 3 Q. Can you name one?

11:40:41 4 A. Oh, wow, okay. So each camera manufacturer has their
11:40:50 5 own proprietary image format that we generally call raw,
11:40:55 6 although each camera manufacturer gives it its own name.

11:41:02 7 For example, Nikon gives it a name of I think CR.

11:41:06 8 And then Canon gives it a different name and on and on. So
11:41:13 9 there's a multitude of names for -- for this. This is why
11:41:19 10 there's a standard for JPEG so that everybody can come
11:41:22 11 together.

11:41:22 12 Q. So you say in Paragraph 412, the JPEG check image does
11:41:30 13 not exist only temporarily in RAM; you say that, right?

11:41:37 14 A. Yes.

11:41:38 15 Q. And you're saying that because it doesn't -- you're
11:41:45 16 saying before that point, when it's just the bitmap data
11:41:49 17 that's been read, as you would say, by the sensor, that
11:41:56 18 that is not the capture of an image because it --

11:42:00 19 A. Not according -- not according to how the patent calls
11:42:03 20 it.

11:42:03 21 Q. Because it just exists in what's called RAM or volatile
11:42:08 22 memory, right?

11:42:08 23 A. There's many reasons that it's not the captured image.

11:42:16 24 Q. Well, you go on to say -- you say, rather, it is
11:42:21 25 transmitted to Wells Fargo's servers for persistent storage

11:42:24 1 in the same way that the iPhone or Android camera captures
11:42:28 2 photos to the mobile device's Flash storage drive or
11:42:32 3 uploads them to the cloud for storage when using the
11:42:39 4 standard camera app -- application. And then you say at
11:42:43 5 the bottom, the image is converted to a file that will be
11:42:46 6 stored permanently, right?

11:42:47 7 A. Yes.

11:42:49 8 Q. And because the image data exists in the camera --
11:42:57 9 excuse me, exists in this program in what you call volatile
11:43:01 10 memory, you say that's not captured?

11:43:04 11 A. That isn't the reason I don't say it's captured.

11:43:08 12 Q. That's one of the reasons you say?

11:43:09 13 A. It's one of the reason, yes.

11:43:10 14 THE COURT: Gentlemen, I've stopped you two or
11:43:12 15 three times, and I am going to insist that you break
11:43:16 16 between responding to a question and asking another
11:43:18 17 question.

11:43:20 18 You're jumping in before he finishes,
11:43:22 19 Mr. Melsheimer.

11:43:22 20 And, Dr. Conte, you're doing somewhat the same
11:43:26 21 thing. I want there to be space between this dialogue.
11:43:30 22 And we're going to do it that way. And I don't expect to
11:43:34 23 have to ask either of you again. So let's proceed.

11:43:39 24 MR. MELSHEIMER: Thank you, Your Honor.

11:43:40 25 THE WITNESS: Thank you, Your Honor.

11:43:41 1 Q. (By Mr. Melsheimer) One of the reasons why you say the
11:43:47 2 image is not captured when it is read by the image sensor
11:43:53 3 and the bitmap is created or read is because that
11:44:00 4 information is not stored in permanent memory?

11:44:09 5 A. No, I wouldn't quite agree with that.

11:44:31 6 Q. Which part of that do you disagree with?

11:44:33 7 A. The image is ultimately going to be stored in permanent
11:44:45 8 memory, ultimately. So the fact that it's in RAM or not,
11:44:52 9 temporary RAM is just -- the image that's in temporary RAM
11:45:03 10 disappears. The image that gets encoded into the JPEG is
11:45:06 11 what, although it's in RAM, ultimately gets transmitted to
11:45:10 12 Wells Fargo's server and stored.

11:45:15 13 Q. Well, that's what you say in Paragraph 412, isn't it?

11:45:17 14 A. That's what I just -- I just summarized Paragraph 412.

11:45:22 15 Q. Which is what your definition of capture is, which is
11:45:24 16 that the JPEG image created and transmitted -- read with
11:45:28 17 me -- the JPEG image created and transmitted, via
11:45:32 18 communication network to Wells Fargo's servers where the
11:45:36 19 check image is stored. This is the first and only time
11:45:39 20 that the check image is captured. That's what you wrote,
11:45:43 21 correct?

11:45:43 22 A. That's what I wrote, yes.

11:45:46 23 Q. That's what capture is to you, correct?

11:45:52 24 A. That is not accurate.

11:45:58 25 Q. Well, sir, you say with emphasis, this is the first --

11:46:04 1 you see that -- and only time that the check image is
11:46:09 2 captured. So we know you're not saying the check image is
11:46:13 3 captured any other time because you say this is the only
11:46:17 4 time, correct?

11:46:19 5 A. The time when the image is created is when it's
11:46:24 6 captured. That's what I'm saying. This refers to the JPEG
11:46:29 7 image is created.

11:46:30 8 Q. But the JPEG image that's created is not the same thing
11:46:36 9 as the image file that is taken in from the image sensor
11:46:43 10 that creates the bitmap, is it, sir?

11:46:45 11 A. I wouldn't characterize that that way, no.

11:46:48 12 Q. Well, it's a different format, right? It goes from the
11:46:53 13 bitmap to JPEG, correct?

11:46:57 14 A. Correct.

11:46:58 15 Q. It's there in bitmap, it's read by this sensor of the
11:47:04 16 camera, and there is a bitmap of that image read by the
11:47:11 17 image sensor, true?

11:47:12 18 A. That's true.

11:47:14 19 Q. And, sir, but you say that particular action of reading
11:47:23 20 the light being read by the image sensor, you're saying
11:47:26 21 that is not capture, right?

11:47:29 22 A. I'm not -- that's not accurate.

11:47:35 23 Q. Well, are you saying that when the image sensor is
11:47:42 24 activated, is that the right word?

11:47:45 25 A. Sure.

11:47:45 1 Q. When the image sensor is activated and the light is
11:47:49 2 taken in and whatever is in the view of that sensor is
11:47:54 3 taken in and read and there's a bitmap file created, are
11:48:00 4 you saying that is captured?

11:48:04 5 A. Your description is not accurate as to the operation of
11:48:08 6 the phone or the application.

11:48:09 7 Q. So I want to know -- so I can rely on your report,
11:48:14 8 right?

11:48:14 9 A. Yes, sir.

11:48:15 10 Q. Okay. And you're not trying to change it or modify it
11:48:18 11 in any way, right?

11:48:19 12 A. I stand behind it.

11:48:20 13 Q. Okay. So I want to just make sure I understand that is
11:48:25 14 it your, testimony, that when this image sensor is
11:48:32 15 activated and there is information taken in and that
11:48:43 16 information is basically light and -- correct, it's light,
11:48:47 17 isn't it?

11:48:47 18 A. Yes, sir.

11:48:49 19 Q. And when that light information is taken in and a
11:48:54 20 bitmap is created, are you saying that is capture, or are
11:48:58 21 you saying something else is capture?

11:49:00 22 A. I'm saying the capture happens after the monitoring
11:49:07 23 criteria are passed.

11:49:08 24 Q. That's a different issue that we're going to discuss in
11:49:10 25 a minute. I'm talking about what you say the act of

11:49:15 1 capture is.

11:49:17 2 Let me back up and say it a different way.

11:49:20 3 The Court in this case has not told us what
11:49:25 4 capture means, isn't that right?

11:49:28 5 A. That's correct.

11:49:29 6 Q. So unlike "when," which the Court has told us means at
11:49:36 7 or after, the Court has said capture just has its ordinary
11:49:41 8 meaning, right?

11:49:43 9 A. Correct.

11:49:44 10 Q. And when you say ordinary meaning, we all understand
11:49:49 11 that that means not just sort of a slang meaning but what
11:49:53 12 somebody that would understand, a person of ordinary skill
11:50:00 13 in this field would understand capture to be, right?

11:50:05 14 A. That's correct.

11:50:06 15 Q. And, in fact, sir, isn't it true that before coming
11:50:12 16 into court some years ago, that you have used the word
11:50:17 17 capture to refer to what happens at the image sensor?

11:50:26 18 A. I don't recall one way or another if I used that in the
11:50:31 19 past.

11:50:32 20 Q. Well, are you familiar with this book?

11:50:38 21 A. Yes.

11:50:38 22 Q. Okay. It's called Computer Architecture, a
11:50:43 23 Quantitative Approach, written by Mr. -- Mr. Hennessy and
11:50:48 24 Mr. Patterson. And it's a book about computer
11:50:51 25 architecture, right?

11:50:51 1 A. That's correct.

11:50:52 2 Q. Okay. Now, you contributed a part to this book, didn't
11:50:56 3 you?

11:50:57 4 A. I contributed an appendix.

11:50:59 5 Q. Right. And so we're clear, the appendix I've got is
11:51:04 6 actually in a -- in a DVD or CD, right?

11:51:07 7 A. Many people contributed appendices to this book. Yeah,
11:51:12 8 and it's big, so that's why they did that.

11:51:16 9 Q. Understood. And I'm not trying to -- I just want to
11:51:19 10 make sure that we're communicating that I can't read it in
11:51:21 11 the actual pages, but it's actually sort of in the back
11:51:25 12 here in a CD, along with many other worthwhile
11:51:29 13 contributions, right?

11:51:30 14 A. I assume.

11:51:31 15 Q. Okay. And you've read that, haven't you? You wrote
11:51:35 16 it, right?

11:51:35 17 A. Yes.

11:51:36 18 Q. Okay. So let's take a look at -- it is in your binder
11:51:45 19 at Volume 2, Tab 21. And the part I'm looking for, sir, is
11:52:04 20 Page D19. Do you see that? Case Study: Sanyo VPC-SX500
11:52:32 21 Digital Camera. Do you see that?

11:52:35 22 A. Yes.

11:52:35 23 Q. And you say, sir -- and you're talking about taking
11:52:48 24 pictures here, right?

11:52:49 25 A. This is actually not my writing. They asked me to

11:52:51 1 integrate writing from other portions of the book. So my
11:52:57 2 function in creating this appendix was to integrate
11:53:00 3 sections that had already been written in the book into an
11:53:04 4 embedded system section, and then add some blue text.

11:53:21 5 Q. Let me ask you a question. This is an appendix that
11:53:24 6 you were involved in helping create?

11:53:26 7 A. Yes, I would describe it as being the editor of, but,
11:53:29 8 yes.

11:53:30 9 Q. And just so we're clear for the jury's benefit, there's
11:53:34 10 actually a number of pages in this section which is
11:53:36 11 entitled embedded systems, right?

11:53:38 12 A. That's correct.

11:53:39 13 Q. And just so there's no confusion, that's you?

11:53:51 14 A. Yeah, it says updated by.

11:53:53 15 Q. Updated by Thomas Conte. So you had a free reign to
11:53:59 16 take things out that you thought were inaccurate, right?

11:54:02 17 A. Oh, yeah, I see what you're saying. They didn't ask me
11:54:05 18 to do that. I wouldn't say I had free rein.

11:54:07 19 Q. Well, you wouldn't have put anything in there that you
11:54:10 20 thought was wrong that had your name on it, right?

11:54:12 21 A. I -- of course, I wouldn't put anything that was wrong,
11:54:15 22 but also these aren't my words.

11:54:16 23 Q. I understand, sir, but I just want to make sure we're
11:54:21 24 not arguing about something we don't need to be arguing
11:54:24 25 about. This is something that you oversaw and created for

11:54:30 1 inclusion in the book Computer Architecture, a Quantitative
11:54:39 2 Approach, right?

11:54:39 3 A. Yes, I want to be specific about my task though.

11:54:42 4 Q. I'm not saying that you wrote every word of this, and
11:54:44 5 you want to make that clear. You did not write every word
11:54:47 6 of this, true?

11:54:48 7 A. That's correct. Indeed, I didn't write the words on
11:54:52 8 Page D19.

11:55:01 9 Q. How do you know that?

11:55:01 10 A. Because I know the words I wrote.

11:55:03 11 Q. When was the last time you looked at this?

11:55:05 12 A. This was 2003 or '4.

11:55:07 13 Q. Did you know I was going to ask you about it today?

11:55:12 14 A. No, I didn't know you were going to ask me about it
11:55:15 15 today, but I remember what I write.

11:55:17 16 Q. So did you review this in preparation for your
11:55:19 17 testimony?

11:55:19 18 A. No.

11:55:20 19 Q. Did you review this before you gave your report in this
11:55:22 20 case?

11:55:22 21 A. No.

11:55:23 22 Q. Did you review this before you gave your opinion on
11:55:25 23 what capture means?

11:55:26 24 A. No.

11:55:27 25 Q. But you wrote it or oversaw it -- strike that.

11:55:32 1 You oversaw this report -- or this writing well
11:55:37 2 before you got involved in this lawsuit; isn't that right,
11:55:40 3 sir?

11:55:40 4 A. Yes, I believe it was about 2003.

11:55:42 5 Q. And you didn't get involved in this lawsuit until about
11:55:45 6 15 years later?

11:55:46 7 A. Yeah.

11:55:46 8 Q. So what the text says, when a photographer takes a
11:55:51 9 picture, he first holds the shutter halfway so that the
11:55:55 10 microprocessor can take a light reading. The
11:55:59 11 microprocessor then keeps the shutter open to get the
11:56:06 12 necessary light. You and I were talking about light a
11:56:08 13 minute ago, right?

11:56:09 14 A. Yes.

11:56:09 15 Q. Which is captured by a CCD, which is called a charged
11:56:14 16 coupled device, right?

11:56:16 17 A. Yes.

11:56:17 18 Q. And it's captured as red, green, and blue pixels, true?

11:56:23 19 A. Yes, that's describing the circuit.

11:56:25 20 Q. Those are the primary colors that make up the world,
11:56:30 21 right?

11:56:30 22 A. Of color addition, yes.

11:56:32 23 Q. The CCD is a half inch, 30 -- 13 by 160 times 124 [sic]
11:56:45 24 pixel, progressive-scan chip. And I don't want to skip
11:56:58 25 over this, sir, but -- capture?

11:57:12 1 A. Yes.

11:57:12 2 Q. You then talk about -- the article then talks about the
11:57:29 3 next step as something separate from capture, and what is
11:57:35 4 the next step in this -- in this article, sir?

11:57:41 5 A. The next step is to compress the image into a standard
11:57:45 6 format, such as JPEG, and store it to a removal of Flash
11:57:51 7 memory.

11:58:06 8 Q. So in this article, at least, written 15 years before
11:58:09 9 you got involved in this lawsuit, the capture notion
11:58:11 10 happens first and compression happens second; isn't that
11:58:14 11 right, sir?

11:58:14 12 A. It's not the same capture notion, no.

11:58:19 13 Q. But it is the same word?

11:58:22 14 A. Sure.

11:58:23 15 Q. And, sir, if we go to your report, Volume 1, Tab 3?

11:58:38 16 A. Give me a moment, I've got to --

11:58:40 17 Q. Yes, sir. I'm going to need a moment, too.

11:58:52 18 THE COURT: Approach the bench, counsel.

11:58:57 19 (Bench conference.)

11:59:02 20 THE COURT: Is this book a pre-admitted exhibit,
11:59:05 21 or is this some type of impeachment?

11:59:08 22 MR. MELSHEIMER: It's impeachment, Your Honor.

11:59:09 23 THE COURT: All right. It's 12:00 noon.

11:59:12 24 MR. MELSHEIMER: Could I have another minute, Your
11:59:15 25 Honor, on this subject matter, and then we could break for

11:59:17 1 lunch?

11:59:18 2 THE COURT: I'm asking you how much more cross you
11:59:20 3 have? You told me an hour when we broke, and you're going
11:59:24 4 on an hour and 40 or 50 minutes now.

11:59:27 5 MR. MELSHEIMER: Your Honor, I hope I'm not the
11:59:29 6 first lawyer that's ever misstated the --

11:59:31 7 THE COURT: You aren't, but that's why I'm asking
11:59:34 8 again.

11:59:34 9 MR. MELSHEIMER: I understand, Your Honor. So I
11:59:37 10 think I am going to need about another half-hour.

11:59:41 11 THE COURT: All right.

11:59:42 12 MR. MELSHEIMER: And I'm not just saying that to
11:59:44 13 get a break. I'm saying that I think I can briefly cut it
11:59:47 14 back if I have some time to cut it back.

11:59:50 15 THE COURT: Are you telling me you need another
11:59:52 16 question or two to finish this?

11:59:54 17 MR. MELSHEIMER: I am, Your Honor. If I could
11:59:55 18 indulge the Court, I would appreciate it.

11:59:57 19 THE COURT: That will be fine. Let's do that, and
11:59:59 20 then we'll break for lunch.

12:00:00 21 MR. MELSHEIMER: Thank you, Your Honor.

12:00:01 22 (Bench conference concluded.)

12:00:04 23 THE COURT: All right. Let's proceed when you're
12:00:06 24 ready, counsel.

12:00:07 25 Q. (By Mr. Melsheimer) So if we can go to your report,

12:00:10 1 sir. And if you'll go to Page 83 of your report. Tell me
12:00:41 2 when you're there, sir.

12:00:43 3 A. I'm there.

12:00:44 4 Q. Oh, I apologize, Paragraph 83, Dr. Conte. I wasn't
12:00:49 5 precise. And especially the part on Page 38.

12:01:03 6 So just to set the context, sir. This article
12:01:06 7 that you oversaw 15 years ago talks about capture being
12:01:12 8 separate from compression, right?

12:01:17 9 A. I wouldn't characterize this as the same -- in the same
12:01:23 10 way.

12:01:24 11 Q. But we can at least agree that capture is described,
12:01:27 12 and then something that's called the next step is
12:01:30 13 compression. That's what the words are, right?

12:01:33 14 A. That's what the words say, yes.

12:01:35 15 Q. And it turns out, sir, that that's exactly the way you
12:01:46 16 describe it in Paragraph 83 of your report, isn't it?

12:01:50 17 A. Can you point it out, I'm sorry?

12:02:03 18 Q. Yes. Page 38. Go to the bottom, sir.

12:02:10 19 A. Okay.

12:02:11 20 Q. Mitek MiSnap on mobile device. Do you see that?

12:02:18 21 A. Yes.

12:02:19 22 Q. That is what we're here talking about this week, true?

12:02:23 23 A. That's part of what we're talking about, sir.

12:02:26 24 Q. And you've got the steps laid out. What's the first
12:02:27 25 step?

12:02:27 1 A. Image capture.

12:02:28 2 Q. What's the second step?

12:02:30 3 A. IQA threshold checking.

12:02:33 4 Q. That's image quality assessment, that's monitoring,
12:02:36 5 right?

12:02:36 6 A. That's Mitek's word for it, yes.

12:02:38 7 Q. And then JPEG processing, right?

12:02:39 8 A. Yes. These aren't a sequence, sir.

12:02:43 9 Q. Sir?

12:02:43 10 A. These are not a sequence, sir.

12:02:45 11 Q. Let me ask you the question again, sir.

12:02:51 12 MR. MELSHEIMER: And I apologize to -- to the
12:02:52 13 Court for interrupting.

12:02:53 14 Q. (By Mr. Melsheimer) This is Paragraph 83 of your
12:02:58 15 report, right?

12:02:59 16 A. That's correct.

12:03:00 17 Q. You wrote this?

12:03:02 18 A. Yes.

12:03:03 19 Q. You chose the words for it, right?

12:03:05 20 A. Yes.

12:03:07 21 Q. And the words you chose and the sequence you chose was
12:03:11 22 capture, monitor, compress. Those -- those are the words
12:03:23 23 on the page, sir, true?

12:03:27 24 A. Those are the words on the page.

12:03:31 25 MR. MELSHEIMER: Your Honor, what I represented to

12:03:32 1 the Court, this was the conclusion of this portion.

12:03:34 2 THE COURT: All right. Ladies and gentlemen,
12:03:36 3 we're going to break at this point for lunch.

12:03:39 4 I'm going to ask you to take your juror notebooks
12:03:43 5 with you to the jury room. Lunch is there waiting for you.

12:03:45 6 Follow all the instructions I've given you,
12:03:47 7 including not to discuss the case among yourselves. And
12:03:51 8 we'll try to reconvene somewhere in the neighborhood of
12:03:56 9 12:45 to 12:50.

12:03:58 10 With that, the jury is excused for lunch.

12:04:00 11 COURT SECURITY OFFICER: All rise.

12:04:01 12 (Jury out.)

12:04:02 13 THE COURT: Counsel, there were matters we
12:04:28 14 discussed in chambers this morning that I directed the
12:04:31 15 parties to continue to meet and confer on. We're going to
12:04:35 16 break for lunch.

12:04:35 17 But in about roughly 30 minutes, I'd like a
12:04:38 18 representative from each side to update the Court on where
12:04:44 19 we are on those matters.

12:04:45 20 With that, we stand in recess.

12:04:47 21 COURT SECURITY OFFICER: All rise.

12:04:48 22 (Recess.)

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CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

/S/ Shelly Holmes
SHELLY HOLMES, CSR, TCRR
OFFICIAL REPORTER
State of Texas No.: 7804
Expiration Date: 12/31/20

10/31/19
Date